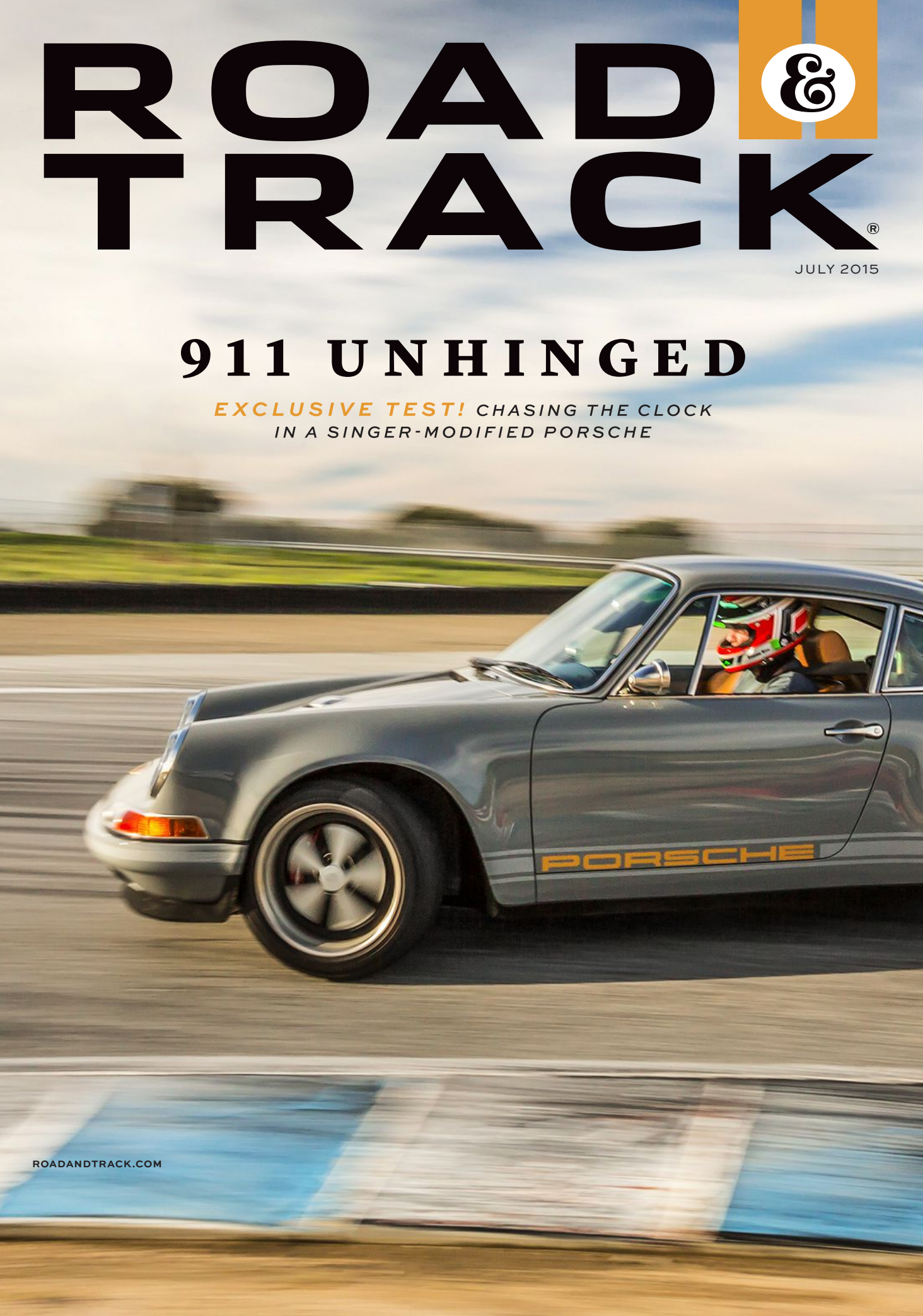
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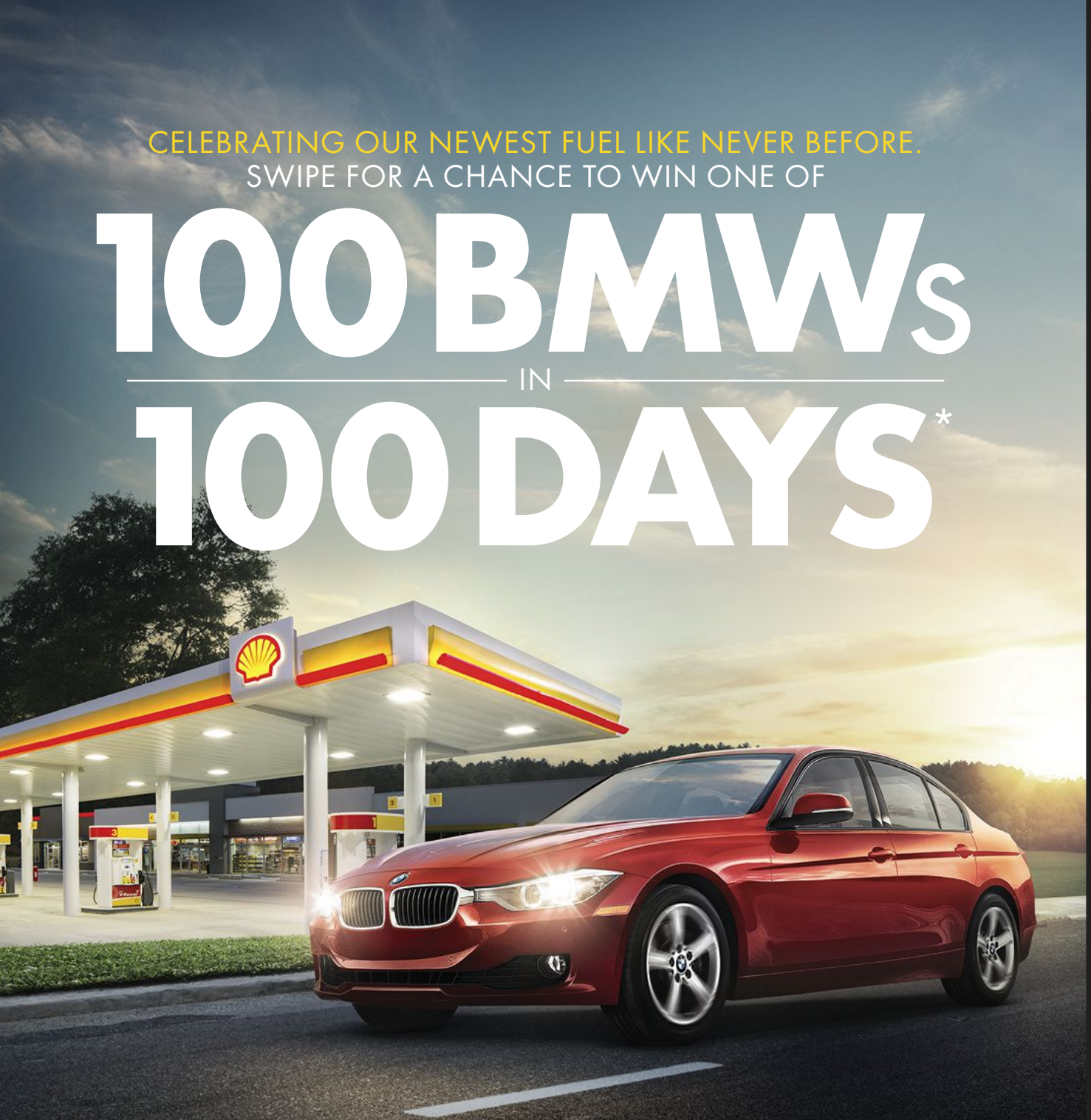
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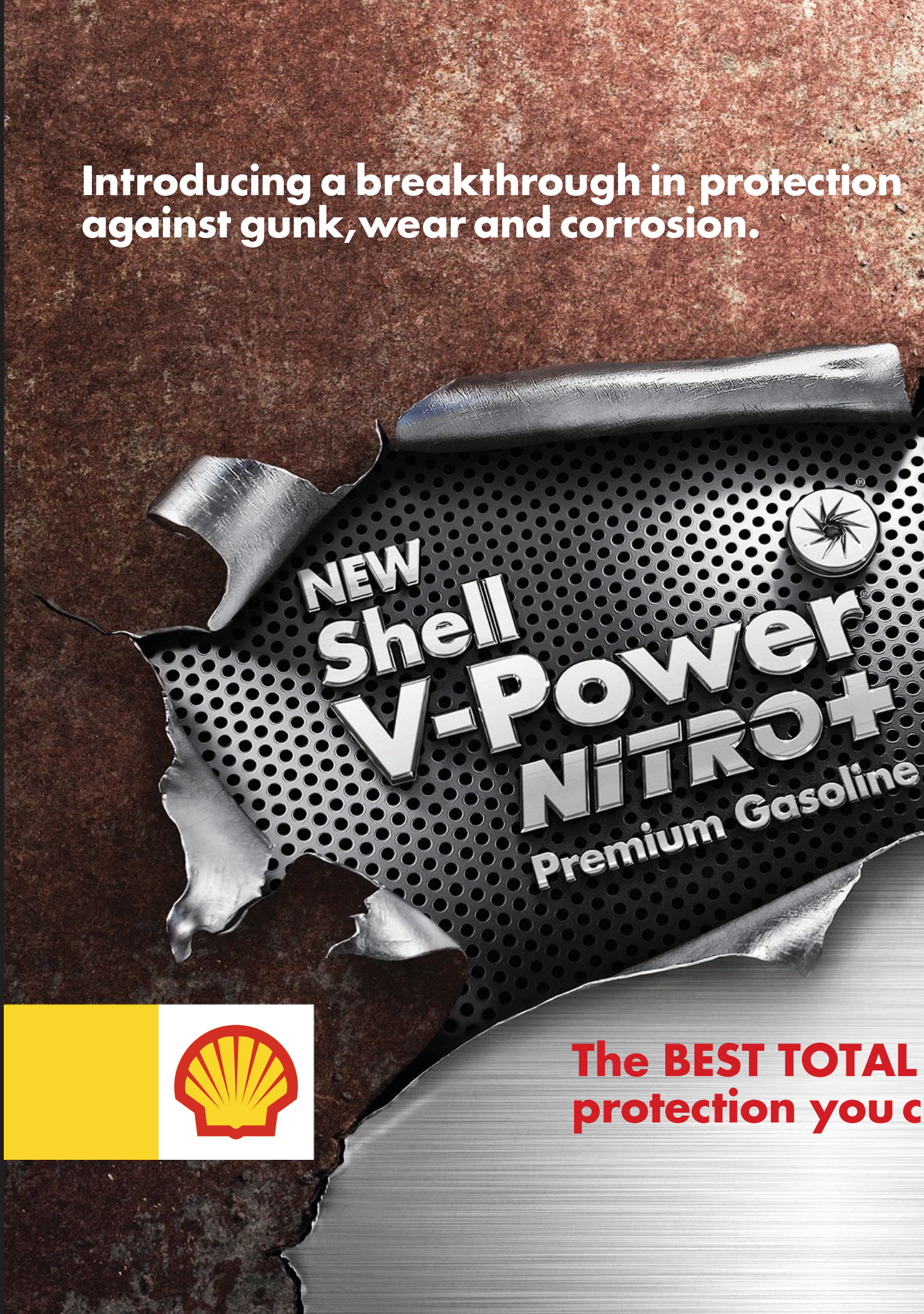




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SINGER-MODIFIED PORSCHE 911

Lapping Laguna Seca in a bespoke reimagining of the world's finest sports car.

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TESLA MODEL S P85D

Bicoastal test of the new AWD, 691-hp electric sedan. Is it the quickest car in the world?

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2014 CORVETTE STINGRAY Z51

The inaugural R&T Performance Car of the Year serves 12 months as office track rat.

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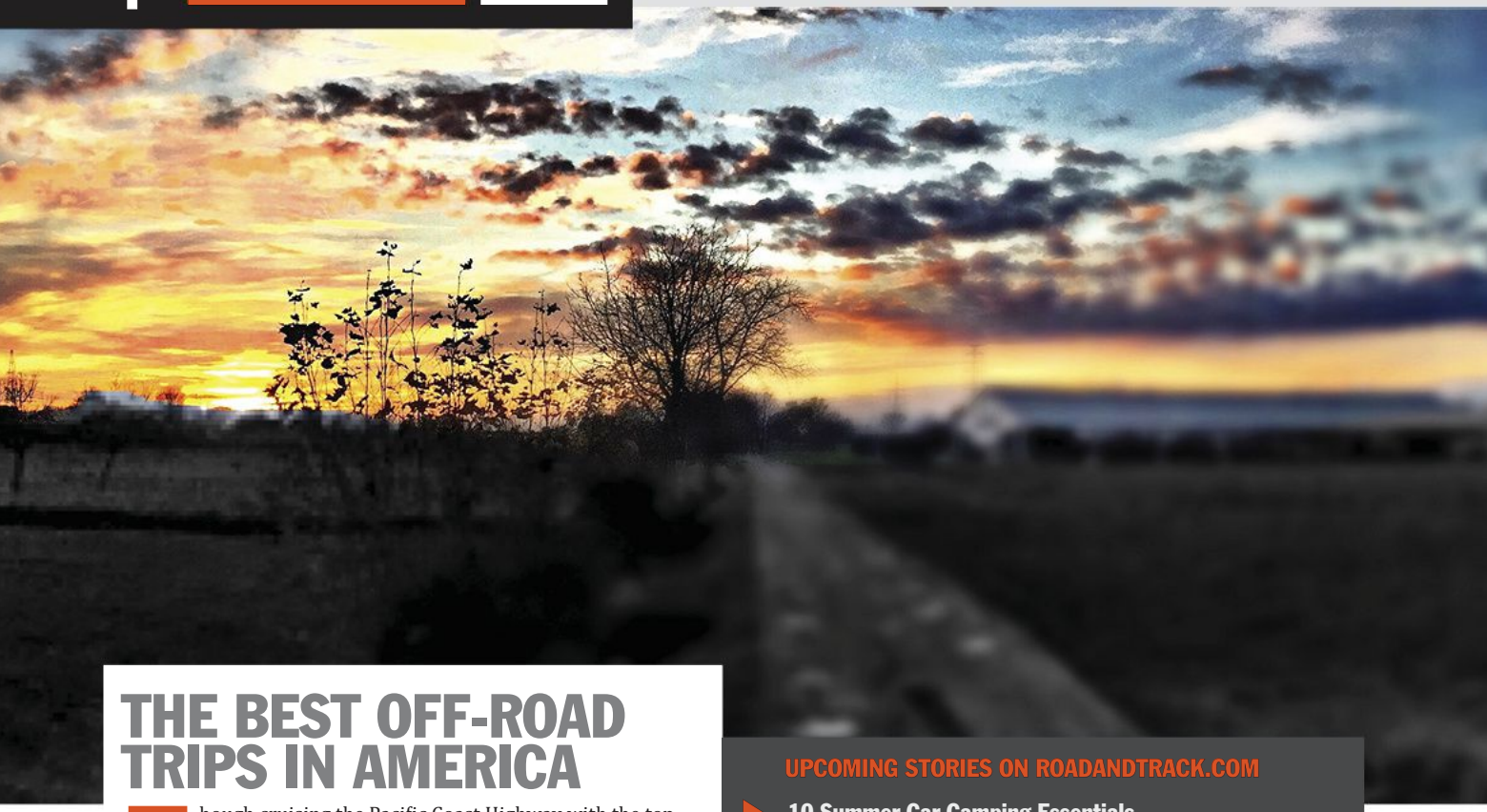


COVER PHOTOGRAPH BY **EVAN KLEIN**

THE CODE

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Road & Track has partnered with Ford to bring you The Code, a new editorial program inspired by the all-new 2015 Ford F-150, and the men who drive them. From the skills every man should have and the latest in gear to smart news and entertainment, The Code brings the spirit of "Built Ford Tough" to life.



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WALTER RÖHRL, AUDI SPORT QUATTRO S1, 1987

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CAPTURING THE LIFE AT SPEED

Nineteenth century explorer Zebulon Pike doubted man could ascend the Colorado peak that would eventually bear his name. Today, it's still far from a sure thing. And yet every summer, the mountain's deep pines fill with drivers willing to try for the 14,000-foot summit 12.4 miles away. Beginning at 8 a.m., cars and motorcycles and trucks rip into the sky, each hoping to slice through 156 turns faster than the last. It's demanding, and the consequences for a lapse in attention are severe. But that's the allure, isn't it? June 28 marks the hill climb's 93rd running. There's glory at the top of Pikes Peak, somewhere beyond our doubts, waiting in the clouds.

PHOTOGRAPH BY STEPHEN SULLIVAN
CANON EOS 5D MARK III, 16–35MM F/2.8 LENS @ 16MM, ISO 200, F/16.0, 196 SECONDS



Go



TOP: PETE BIRO; BOTTOM: FROM THE COLLECTIONS OF THE HENRY FORD

FAMILY AFFAIR

Nobody does Pikes Peak like the Unser clan. Brothers Joe, Jerry, and Louis first took a sidecar motorcycle up the mountain in 1915. Louis eventually won nine times, piloting everything from single-seat specials to a big-body Mercury (above). Jerry's son Louie won his class in '60 and '61; Louie's brother Bobby (right) is a 13-time King of the Mountain; Bobby's son Robby dominated Pikes Peak into the Nineties. The Unsers may be at the heart of the Brickyard, but they've got Colorado dust in their veins.



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EVOLUTION

Quicker, nastier, all-wheel-drive rally cars, like Ari Vatanen's 1987 Peugeot 205 (right), invaded Pikes Peak during the Group B era. Footage of his record-setting 1988 run was edited into a cinema verité epic, **Climb Dance.** ***Scored only by ambient noise and anti-lag, the five-minute short won several international film festival awards in 1990. Two years later, Nobuhiro "Monster" Tajima (shown in 2014) made his debut in a twin-engine Suzuki. Then things got downright bonkers. Monster buried records, caught a hydrocarbon conscience, switched to a nearly 700-hp lithium-ion-powered prototype, and kept winning.***

PHOTOGRAPH (BELOW) BY NATHAN LEACH-PROFFER
NIKON D800, 24–70MM F/2.8 LENS @ 70MM,
ISO 50, F/2.8, 1/125 SEC



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THE CHAMPION

Much to the chagrin of Pikes Peak's old guard, the course's remaining dirt sections were paved in 2012. Upside? The climb just keeps getting faster and faster. Case in point: Sébastien Loeb, perennial rally champion and categorical badass, who went ballistic in an 875-hp, purpose-built Peugeot hatch. The Frenchman laid waste to the previous record by some one and a half minutes, posting a time of 8 minutes, 14 seconds. That was back in 2013. The Seven Minute Club is knocking now. Who will answer?

PHOTOGRAPH BY FLAVIEN DUHAMEL/RED BULL CONTENT POOL




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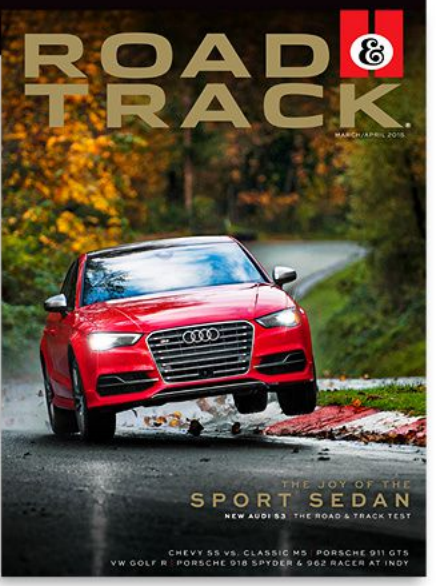
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Letters

OUR AUDI S3 ADVENTURE HIT HOME. EGAN STOPPED IN. YOU WENT WILD.



Dear R&T,

I'm not a huge Audi fan, but the writing in your S3 review ["Nowhere in Particular," March/April 2015] was superb. Zach Bowman didn't just regurgitate facts and figures from a press release. He made me feel like I was in the car, experiencing the sights and sounds and smells. It made me want to head to Washington and drive those same epic roads. Keep these stories coming!

TOM ST. JOHN, ONEONTA, NEW YORK

Curse you, Bowman! Those roads are supposed to be *secret*.

JON TAYLOR
RENTON, WASHINGTON

Your "Road & Track" formatted test of the new Audi S3 was amazing. I loved seeing the bright-red paint covered in dirt, proof that the car was driven with passion. I renewed my subscription for three years, which puts me over the two-decade mark. Just keep that Bowman guy busy writing.

DENNIS ROLLINS
VAIL, ARIZONA

A 14-page homage to an Audi S3 2.0T Quattro Whatever S Tronic? Y'all sure peed in BMW's Cheerios.

PHIL FUSILIER
TALLAHASSEE, FLORIDA

I was truly disappointed in Zach Bowman's report on the Audi S3. I fail to see any benefit from thrashing a car. That has nothing to do with normal driving. I rather doubt Bowman would drive like a madman if he'd paid for the car with his own hard-earned dollars.

NIGEL J. POTTS
SURREY, BRITISH COLUMBIA

Bowman's hard-earned dollars are busy installing a 2.0-liter EcoBoost four into his rusty old Fox-body Mustang. (Google "Project Ugly Horse.") He fully intends to drive it like a madman.

EGAN, AGAIN (AND ALWAYS)

The prison of no Egan was getting to us. We banged our tin cups next to our bread and water, chanting "Egan! Egan! Egan!" hoping for early parole. Then, in the March/April issue: "I dusted Barb off, which I thoroughly enjoyed . . ."

FRITZ GROSZKRUGER
DUMONT, IOWA

After being cooped up with a nasty winter cold, I was pleased to find a new *R&T* in my mailbox. I was even more pleased to see Peter Egan's guest column. A dose of his wonderful storytelling was just what the doctor ordered, a cool compress for my fevered brow. Thanks for another gem.

KURT MIYATAKE
OLYMPIA, WASHINGTON

Since Peter Egan announced he was retiring but would continue contributing, I've searched the table of contents for Side Glances every month. And there it was! The style, pace, circumstance was vintage Egan. If this was an attempt at April Fools' humor, you did a fine job.

TERRY WRIGHT
CHINA SPRING, TEXAS

No April Fools' here. Peter is as much a part of this magazine's heritage as the ampersand. We'll continue to publish Side Glances whenever he has time to write them. Promise.

CANNON FODDER

John Krewson's article on crash testing ["Crash-Test Human"] was perfectly written. Enjoyable, informative, and irreverent, it had direction and achieved its goal: I wasn't even going to read the story, and now I'm writing about it.

ED SLAVIN
MENARD, ILLINOIS

After looking at your article about safety and crash testing, I've concluded the only dummy is whoever decided to use a Subaru WRX as the car to crash into.

JOSH MEHL
PITTSBURGH, PENNSYLVANIA

BRINGING LEGENDS TO LIFE

I'll never drive a Porsche 962 or 918 Spyder, so thanks to Sam Smith for giving me the vicarious ride of my life reading "Family Legends." He articulated (with passion) why pure racing cars, especially fantastic ones like the 962, cannot be

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EDITOR'S LETTER BY LARRY WEBSTER

LAST SUMMER, I squeezed into the passenger seat of a lawn kart and went for a ride with Sam Posey. Sam is a lifelong racer who competed in everything from Trans-Am to Formula 5000, sports cars to F1, rubbing paint with Jackie Stewart, Brian Redman, and many others along the way. He's also a supremely talented wordsmith and a longtime contributor to *Road & Track*.

Sam retired from driving professionally in 1982. He's now 71 years old and battling Parkinson's disease. While his writing is sharp as ever, I wondered if time and illness might have dulled his inner wheelman.

Nope. He buried the kart's throttle, and we tore down a mini road course worn into the grass surrounding his Connecticut home. I looked over to see windswept hair and a massive, toothy grin: pure joy. We arced around a willow tree. "That's the Station hairpin," he yelled, "named after a similar turn at Monaco."

As much as I admire Sam's driving talent, I also have great respect for how he handles life outside the cockpit, continually exploring new passions. He built a 250-foot model-train replica of the Colorado Midland Railway in his basement. Most of his days are now spent oil painting in a converted barn studio. Meeting heroes is a tricky business, but Sam's enthusiasm and curiosity are infectious, the kind that lift anyone in his orbit. Quality time with him over the past three years has been one of the greatest perks of taking the reins at *R&T*.

A photo of Posey at Le Mans was taken by his wife, Ellen, in 1971. It was their first date.

That cocktail of enthusiasm, curiosity, and artistic flair is at the core of his latest book, *Where the Writer Meets the Road* (David Bull Publishing, $30). It's a well-curated collection of his best material spanning the past four decades, part memoir and part historical reference. Included are speeches for the Road Racing Drivers Club, his F1 television-broadcast teases, and playful back-and-forth with racing rival and friend David Hobbs. Of course, there's plenty from the pages of *R&T,* but also the unexpected, like punchy lead-in scripts he penned for ABC's coverage of the Iditarod dogsled race. Each article has a short foreword explaining and contextualizing the original mission. Even the photos tell stories: One candid of Sam standing by a NART Ferrari 512 was taken by his wife, Ellen, trackside at Le Mans in 1971. It was their first date. This is the best book you'll read all summer.

As always, Sam's greatest skill is putting the reader there, right in the action, with unflinching honesty. You'll get to know the likes of Phil Hill and Mario Andretti, but not just for their accomplishments—Sam paints the entire picture, warts and all. Perhaps most important, through this book, you'll get to know its author.

In many ways, Sam embodies what this magazine is all about. In each issue, we strive to capture his level of energy and passion. So after you've finished this month's *R&T,* pick up a copy of *Where the Writer Meets the Road*. I guarantee you'll want to meet the man and have him sign your book, which you can do Labor Day weekend at the Lime Rock Historic Festival. ■

CHRIS CANTLE

Letters CONT.

compared to anything with a license plate. Smith captured the thrill of driving a car built to win Le Mans. No compromises, no shortcuts, and no frills. I'd rather be the passenger in a Spec Miata on track than drive a 918. This is an article I'll save and reread.

JOHN ENGLISH
BIRMINGHAM, ALABAMA

THREE-BOX THROWDOWN
Kudos for the "Category Five" comparison test. The BMW is a finely honed machine, and the Chevy shows how much progress we've made. It outaccelerates, outcorners, and outbrakes an M5, one of the greatest performance cars ever. Yet the SS meets more stringent crash standards, offers a trunk that's 50 percent larger, and gets 10 percent better fuel economy.

GREGG PETERSON
SYLVAN LAKE, MICHIGAN

BUMP IT UP
I have an additional tip for servicing Hewland transaxles [Lost Art]. Try bumping the starter motor to get the splines lined up so the gear carrier slides home. It's a satisfying moment, one that rivals twisting a crank in fresh bearings.

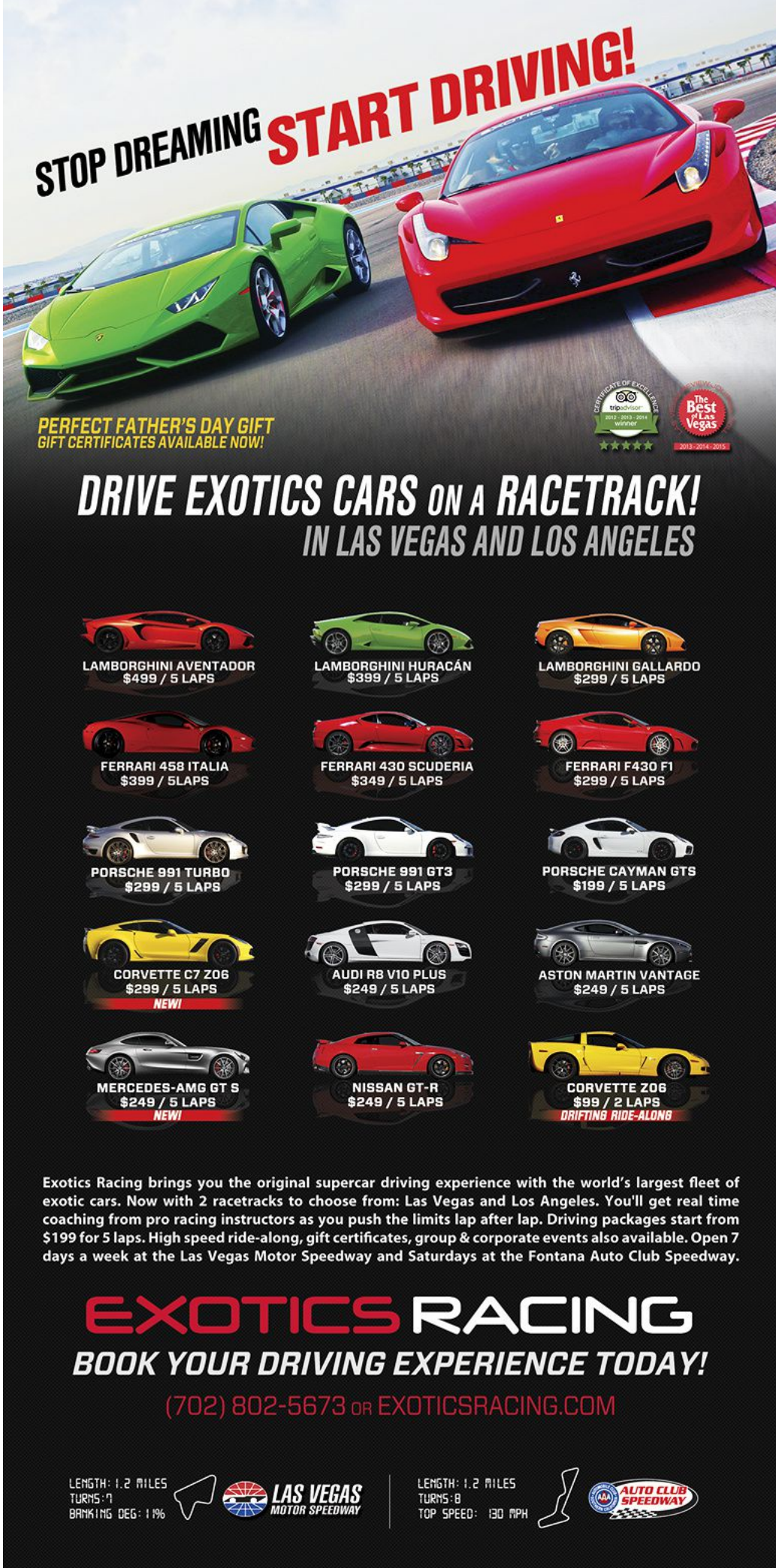
PETE CAGE
DAMASCUS, MARYLAND

MO' MONEY, MO' PROBLEMS
Your review of the Porsche 911 Carrera GTS ["Monster Inc."] casually mentions that the car is available "at bargain-bin prices." The GTS costs $115,195. Now, I'm no economist, but I suspect this is the first time since the invention of money—or maybe even numbers—that $115,195 has been referred to as "bargain bin."

PETER CANTAMESSA
EAST BRUNSWICK, NEW JERSEY

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EPA-estimated 46 MPG Hwy

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717 HWY MILES ON A SINGLE TANK[3]

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Philadelphia to Louisville	*672 miles*
Omaha to Dallas	*658 miles*

264 lb.-ft. of Torque

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lb-ft.

2015 Cruze Diesel	*264 torque*
2015 VW Jetta TDI	*236 torque*
2015 Audi A4 2.0 TFSI	*258 torque*
2015 BMW 528i	*260 torque*
2015 Porsche Cayman	*213 torque*



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151 Horsepower

PLENTY OF GET-UP-AND-GO

Getting up to and cruising at highway speeds feels nearly effortless in Cruze Diesel. That's what happens when you equip your 151-horsepower 2.0L turbocharged engine with central Direct Injection, a common rail fuel system with piezo injectors and a variable-swirl intake manifold design.

151 HORSEPOWER

Built-in 4G LTE Wi-Fi

MAKE A CONNECTION

The available built-in 4G LTE Wi-Fi[1] offers a better connection than your smartphone and the ability to connect up to seven devices at once. So you can stream your music playlist while your passengers stream their favorite games or movies — keeping everyone happy.

2.0L Engine

DIESEL'S CLEAN SLATE

The Cruze Turbo Diesel uses a Selective Catalytic Reduction (SCR) system to convert oxides of nitrogen into harmless nitrogen and water. The SCR system uses a Diesel Exhaust Fluid (DEF or AdBlue) in addition to the standard Diesel Oxidation Catalyst (DOC), which converts hydrocarbons and carbon monoxide into harmless gases. It generates at least 90% less NOx emissions than previous-generation diesels. Its emissions are below strict U.S. environmental standards.





5-Star Overall Vehicle Score for Safety[7]

SURROUNDED BY SAFETY

The 2015 Cruze has received a 5-Star Overall Vehicle Score for Safety in government testing. In addition, Cruze has more standard safety features than any car in its class. It's also the first car in the segment to offer 10 standard air bags,[8] including side-impact and knee air bags that help protect the driver and front passenger. Its high-strength steel safety cage and roof-crush resistance surpass requirements. And StabiliTrak® helps keep Cruze on track during slippery conditions.

CHEVROLET

1 Requires compatible mobile device, active OnStar service and data plan. Visit onstar.com for details and system limitations. 2 Based on Cruze Turbo Diesel EPA-estimated 46 MPG highway. See fueleconomy.gov for more information. 3 Based on Cruze Turbo Diesel EPA-estimated 46 MPG highway and fuel tank capacity. Your range may vary. 4 Full functionality requires compatible Bluetooth and smartphone, and USB connectivity for some devices. 5 Go to gmtotalconnect.com to find out which phones are compatible with the vehicle. 6 Requires available Chevrolet MyLink. Data plan rates apply. 7 Government 5-Star Safety Ratings are part of the National Highway Traffic Safety Administration's (NHTSA's) New Car Assessment Program (www.SaferCar.gov). 8 Based on GM Compact Car segment. Always use safety belts and child restraints. Children are safer when properly secured in a rear seat in the appropriate child restraint. See the Owner's Manual for more information. *©2015 General Motors. All rights reserved.*



French Confection

THE SWEET ALLURE OF THE SLOW AND DANGEROUS.

SMITHOLOGY BY SAM SMITH

EVERYONE QUOTES *FERRIS BUELLER'S DAY OFF* the first time they drive a fast Ferrari. The first time I met a slow Citroën, I couldn't shake the film, either. Not the part where Mia Sara pours herself into Matthew Broderick's fake Cal Spyder. Earlier.

"Life moves pretty fast," Broderick says. "If you don't stop and look around once in a while, you could miss it."

This is perpetually true, unless you are inside a Citroën 2CV. There you miss nothing, because the car is so astonishingly slow, you have time to see everything. Twice.

Some 3.87 million 2CVs were built between 1949 and 1990. My friend Greg Long insisted on lending me his for a week last month, when I found myself carless in Seattle. I don't know how to thank Greg for this, but it would be journalistically improper to label him, in print, the greatest living person in the Pacific Northwest. So this is me, definitely not doing that.

The 2CV was France's VW Beetle, a nation's cheap mobility. Simple body, front-drive, air-cooled twin. Greg's car is a 33-hp 1972; early 2CVs made 12 hp, which isn't so much a power rating as the minimum number of years it would take you to drive to Paris, in a 12-horse Cit, from anywhere that is not Paris. (Like, say, the outskirts of Paris.) Europeans nicknamed the car "Tin Snail," but it looked more like the mash-up of a Quonset hut and a stoned Pomeranian. The speed allusion was apt, if generous. Hitch a herd of narcotized snails to a pair of roller skates and yell "Mush!" and you'd still beat a 2CV off a light.

I had driven slow cars before, but never that slow, and never for so long. The fun ones, like the Renault Le Car, are happy trade-offs. The Citroën, built for rutted French farmland, swapped velocity for comfort and a goofy sine wave of drama.

The great sacrifice of progress is the minimization of fear of death.

On the move, a late 2CV is just quick enough to be safe in traffic. You go everywhere flat out, constantly planning. Misjudged merges produce mild heart attacks. With comically soft springs—you can pull a parked 2CV into a 25-degree list by simply tugging on a roof rail—the car rolled like an inflatable punching clown, perpetually flirting with falling over.

That drunken-wheelbarrow chassis could squeeze hyperbole from a dead grandmother. In one roundabout, I may have allowed a door handle to penetrate the earth and scrape China's Great Wall. Chiefly, I was reminded that the great sacrifice of automotive progress is the minimization of fear of death. (Note that I didn't say "chance.") Good old Hunter-Thompson-Sausage-Creature, God-we-feel-alive, barely-escaped-from, death.

Example: Once, trundling down an 18 percent grade into a crowded intersection, I suspected I was about to die. I then laid into the Snail's ferociously uninspiring brakes and became sure of it. At which point a sense of inevitability overcame. I grinned and the car howled, and the car grinned and I howled, and we went ripping through the intersection and around a corner like a runaway train, engine moaning and chassis winding up like a clock spring.

Time collapsed. A singularity was briefly created somewhere in my undercarriage. When the whole thing was over, survival, though obvious, seemed implausible. Bermuda Triangle details arose: My cellphone had magically migrated to the back seat. It was sunny, but the wipers were on. My wife, riding passenger, looked over and said, firmly, "We are *not* doing that again."



At peak, the speedo hit a solid 33 mph. Possibly 34.

A week later, I flew to Texas to test the Cadillac ATS-V (page 86). It was . . . fine. A good car. Maybe even very good. The engine makes 464 hp and a raspy snarl. It cranked through Turn 17 at Circuit of the Americas sideways and gentle, a froufed-up hooligan with leather and manners.

But there was no fear of death, no implausible. Several times, I found myself wishing for less car, not more.

Home now, back from Texas, my undercarriage is making odd demands. I have been broken, and the remedy is obvious.

If I'm lucky, Greg keeps his garage unlocked. ■

Sam Smith is an editor at large for R&T. *His continued marriage, though obvious, seems implausible.*

JOE WINDSOR-WILLIAMS

ILLUSTRATION BY **DREW BARDANA**



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DOT in the Dark

THE FUTURE IS BRIGHT. JUST NOT IN AMERICA.

THE ENGINERDY DEPT. BY JASON CAMMISA

HAVE YOU NOTICED THE STARTLING NUMBER OF cars driving without their lights on recently? I have, and it's pretty scary. About half of all road fatalities occur in the dark, even though we log only a quarter of our miles after sunset. Imagine how much worse those numbers would be if more cars drove without their lights on.

It's easy to blame the drivers, as I did. But, while behind the wheel of a 2014 Lexus ES350 one night, I became someone to blame. I commented that the headlights were weak, with a harsh white color temperature and a beam pattern that more closely resembled a fog light. My passengers agreed. It wasn't until we saw our reflection in a store window that we realized the headlights were off. The harsh light was coming from the LED daytime running lights. The rest of the car was dark—no taillights, no license-plate lights, no side markers. Yet the gauge cluster and center stack were illuminated, so we know the car was smart enough to recognize it was dark out, yet not bright enough to turn its headlights on. The only indication the ES350 was a *Lexus Invisibilius* was a missing green indicator light on the cluster.

In the past, dash lights didn't come on until you turned on the headlights. Those days, even drunk people remembered to turn on their headlights—so they could find the cigarette lighter. Now, even sober drivers routinely forget. Since my Lexus incident, I've been paying attention to lightless cars on the road, and almost every time, the driver is drenched in the glow of an instrument cluster.

Cars with backlit or LCD-screen gauges that are always illuminated should be required to have automatic headlights. As we meander toward the autonomous car, we're sometimes in control of our cars and sometimes not—which is why now, more than ever, we need idiotproof solutions. This is where the government should step in: to prevent drivers from inadvertently risking injury or death in near-lightless Lexuses. Yet there is no law on this matter. The last time something big happened in automotive lighting, it took our government decades to react.

The National Highway Traffic Safety Administration, or NHTSA, is the part of the Department of Transportation that writes and enforces rules on vehicle safety, including lighting. When the U.S. government mandated the sealed-beam headlamp in 1940, it seemingly decreed the headlight done, perfect, and never to be improved upon. The rest of the world, meanwhile, was soon using vastly superior lighting technology. (Remember when you swapped out your pathetic sealed-beams for bright "Euro" H4s?) The U.S. government essentially ignored new lighting technology until 1983, when Ford submitted an ingenious petition for a lighting upgrade on the basis of fuel economy. The argument was that free-form "aero" headlights would help achieve better fuel mileage than flat, sealed-beam units. NHTSA listened, but probably only because it's responsible for fuel-economy standards, too. The 1984 Lincoln Mark VII was the first to receive aero lights. It managed a whopping 20 mpg on the highway, but at least its drivers could see at night.

That was 32 years ago, and the government is again hindering progress on lighting. The rest of the world is being offered adaptive driving beams, or ADBs. These are headlights constructed from a matrix of individually dimmable LEDs, each aimed in a different direction. Using a forward-facing camera, the system can recognize oncoming cars or reflective signs and selectively dim or turn off the LEDs to limit glare. Driving with ADBs is like having your high beams on at all times, except without blinding other drivers. Audi is one of the leaders in ADBs. Its most advanced matrix uses 25 LEDs per headlight and can track up to eight objects simultaneously. It'll only get better as the number of LED segments increases; the next-generation system will use more than 150 of them. Next up? Laser headlights that use digital light processing micromirrors to create 400,000 independently controllable dots of light.

CONTINUED ►



ERIC McCANDLESS

The last time something big happened in lighting, it took our government decades to react.

ILLUSTRATION BY **DREW BARDANA**



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Too bad ADBs are illegal here: DOT rules permit a low beam, a high beam, and nothing in between. Two years ago, Toyota petitioned to allow ADBs. Audi joined in, along with archrivals BMW and Mercedes. "This isn't about competition," says Wolfgang Huhn, Audi's director of lighting development. "It benefits everyone."

NHTSA agrees, calling the ability to see properly at night "a key element of highway safety for all drivers." The agency is currently researching how glare affects motorists who encounter ADB-equipped vehicles. Couldn't it just look to European standards—as it should have back in the sealed-beam days? Apparently not. "The European standard utilizes a series of subjective tests that rely on the opinion of a test driver," NHTSA said in a statement. "This approach does not meet the requirements for NHTSA to adopt practicable performance requirements in an objective way that manufacturers can utilize in self-certification of their vehicles."

In other words, NHTSA wants to boil down this technology to easily reproducible, standardized tests that carmakers can conduct in a laboratory. What the agency should do instead is perform exhaustive, detailed, real-world tests of individual ADB systems.

Either way, NHTSA should get moving. Not only is the agency delaying potentially life-saving safety technology, it's also allowing automakers to sell cars that drive around in the dark. And that doesn't seem bright at all. ■

Jason Cammisa is a senior editor at R&T. *He's clearly afraid of the dark.*



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THE ROAD & TRACK TEST | PORSCHE 911 REIMAGINED BY SINGER

FLAT SEX

SINGER VEHICLE DESIGN TURNS OLD PORSCHES INTO SIX-FIGURE DREAMS. THE REALITY IS ALMOST TOO GOOD FOR WORDS.

BY **SAM SMITH** | PHOTOGRAPHY BY **EVAN KLEIN**



THE ROAD CARMEL, CALIFORNIA

THE 49-YEAR-OLD BEHIND SINGER VEHICLE DESIGN IS A FUNNY, self-effacing Englishman named Rob Dickinson. He is a genuinely nice guy who lives in Los Angeles. He named his company Singer partly because he once fronted a shoegaze band called Catherine Wheel. And he bears the same quiet impishness you see in a lot of L.A. Brits. You wonder if it's a cultural thing, or if all of them aren't just mildly thrilled to be far from their ancestral home, where it has been cloudier, far more polite, and generally unlike California for thousands of years.

At press time, Dickinson's manner and work have convinced 28 people to give him at least $390,000 each in exchange for modifying an old 911. More than 40 others have put down deposits. Each car takes around eight months to finish. Dickinson has been doing this, in one form or another, since 2008.

Even if you like Porsches, the business model sounds unhinged.

Before we go any further, you should know something. I'm going to sound like I'm in his pocket, but . . . the dude *gets it.*

Three hundred and ninety thousand dollars for an ordinary 911 is absurd. But this is no ordinary 911.

Singer specializes in the 964-chassis 911, built from 1989 to 1994. The 964 was the first street 911 with coil-sprung suspension, replacing the traditional torsion bars. The 964 chassis also retains Porsche's classic rear trailing arms, which disappeared in 1995. Along with a rear weight bias, trailing arms help these 911s do wonderful things in corners when you snap your foot off the throttle, and that's all you really need to know about that.

Singer has 35 employees. With the help of some 150 suppliers, they take customer 964s—"the rougher the better," according to Singer production manager Jason Frahm—and turn them into something else. Most things are up to the buyer, but everyone gets the same blueprint, to Dickinson's taste. The shell is stripped and coated. Engineering and manufacturing firm Aria Group fits carbon bodywork, including a roof panel, hood, and fenders. The custom 17-inch wheels look like classic Fuchs alloys filtered through an acid trip. They wear grippy Michelin Pilot Sport PS2s, and like everything else on the car, they are the perfect size.

For the drivetrain, Singer offers a fuel-injected, air-cooled Porsche flat-six. Displacement is 3.6 liters (270 hp), 3.8 (350 hp), or 4.0 (390 hp), with construction by L.A. motorsport stalwart Ed Pink Racing Engines. The suspension, lower and generally stiffer than a 964's, features adjustable Öhlins or KW dampers and a host of modifications. It was dialed in by a gentleman who has asked to remain anonymous, because his 9-to-5 is working as a chassis engineer for a major carmaker. (Many Singer employees have big-league backgrounds; for example, the firm's tech director, Chris Walrod, spent 17 years at race-car manufacturer Swift Engineering.)

That's the ordinary stuff. The rest of the project is a jewel box of history and myth, a sort of greatest-hits Porsche patterned after the car that everyone thinks they remember.

The details are off the reservation. To begin with, a car reimagined by Singer, or Singerized, gets around $12,000 in museum-quality, nickel-plated trim. Much of it is a reproduction or slight tweak of a factory piece, and the car wears it quietly, like accent stitching on a fine suit. If you order the optional external fuel filler, the vintage-style cast cap set into your carbon hood would shame a Tiffany catalog. Virtually everything that bolts onto the exterior is "betrothed" to a specific shell, hand-fit and unswappable to another vehicle. Much of that comes from shrinking the 964's tolerances; the bespoke taillights take eight hours to first mate to the car, in part because they meet the fenders with one-millimeter gaps or they don't leave the shop.

It goes on. Everything in the interior is either built from scratch or reengineered from a factory part. Our test car's optional track seats—one of three types available—offered wide, 1960s-look headrests paired to a modern, wing-back shell. Turn-signal levers and dash switches are modified or flat out reproduced to look like gems and feel like expensive shotgun parts. Gauges get



Basketweave dash leather and one of just two Singer badges allowed on the cars.


TEMP
PRESS
BRAKE
momo



Acres of leather and better build quality than Porsche in its heyday. Somewhere underneath is a 964-chassis 911—likely wondering when it's going to wake up.

vintage-look faces with startlingly accurate fonts and proportioning. Basketweave leather on the dash, at perfect right angles, has individual cutouts for the buttons of the Becker radio. The rear seatbacks and package tray, the shift console, the shift lever and knob and carpets and floor mats—it's all Singer's, both retro and modern, and gorgeous.

That's not everything. We don't have room for everything. Nor do we have a word for this car. The world is full of restomods and backdated 911s. The taste and build quality here make most of them seem like homespun pap.

For perspective, a moment on the door pull: To exit the driver's seat, you tug a leather strap in the armrest, a nod to Porsche tradition. It replaces the 964's latch, rides on a plated rub strip, and feels similar, just heftier and quieter. The greatest difference is that the strap moves forward to open the door—the stock latch pops back.

"That took a long time," Frahm said, gazing at an armrest. He sounded proud and a little weary. "There are probably 30 new parts in that assembly, each one engineered and productionized from scratch."

That's just what they did to a *latch*.

We met our test car in Monterey, where it was being delivered to a man named David MacNeil. Full disclosure: MacNeil founded WeatherTech, an *R&T* advertiser. But because Singer has no press cars, MacNeil graciously lent us his gray example and told us to drive the Butzi off it.

I first saw the car in a parking lot. It sat next to a flashy, late-model Mercedes-Benz sedan, which dwarfed it. The finish was startlingly flawless, as if the whole car had been carved from a giant Pantone chip. The Mercedes's paint, by comparison, appeared to have been laid on with a roller.

"You cannot look like you're trying too hard," Dickinson told me. "That's the mantra. Of course, we try very hard to look like we're not trying hard. Our vision of success is people thinking, *That's a really nice old 911.* I've been in love with this silly car since I was five years old; we're not reinventing it. It's hopefully honest to Porsche's way of doing things."

Dickinson claims to have spent a year molding clay to get the proportions right. The subtlety of the fenders makes that believable. The engine, however, is not subtle. This is the first year Singer has offered 4.0-liters, and MacNeil's is the first example out the door. The engine lid covers a tidy, tailored little suitcase of drivetrain. You see bits of the car's custom wiring harness, which features MoTeC power-distribution modules and a quasi-military layout. It's said to cost around $30,000. The intake manifold, a modified (997) 911 GT3 part, mates to 50-millimeter Jenvey injection throttles and hides its air filter under plated mesh. The engine, most of its ancillaries, and the fan shroud are gloss-coated black. They look like Death's sex toys, only kinkier.

Light the thing off, it sounds hollow and throaty. There's a little chuffing when cold. When word got out that the 4.0 was possible, almost all customers with preexisting orders called to switch to the larger engine. One man sent his car back to

be converted after putting only 100 miles on it. Because he is, apparently, a hero.

Before we left the hotel, one of the car's minders saw me ogling its optional external oil cap.

"You ever seen oil moving around in an old Porsche?"

I had, but I watched anyway. He pulled the cap—warm to the touch—from the right rear fender, exposing a shimmering fountain returning from the engine's dry sump. It was like sticking a camera down someone's aorta. I couldn't look away.

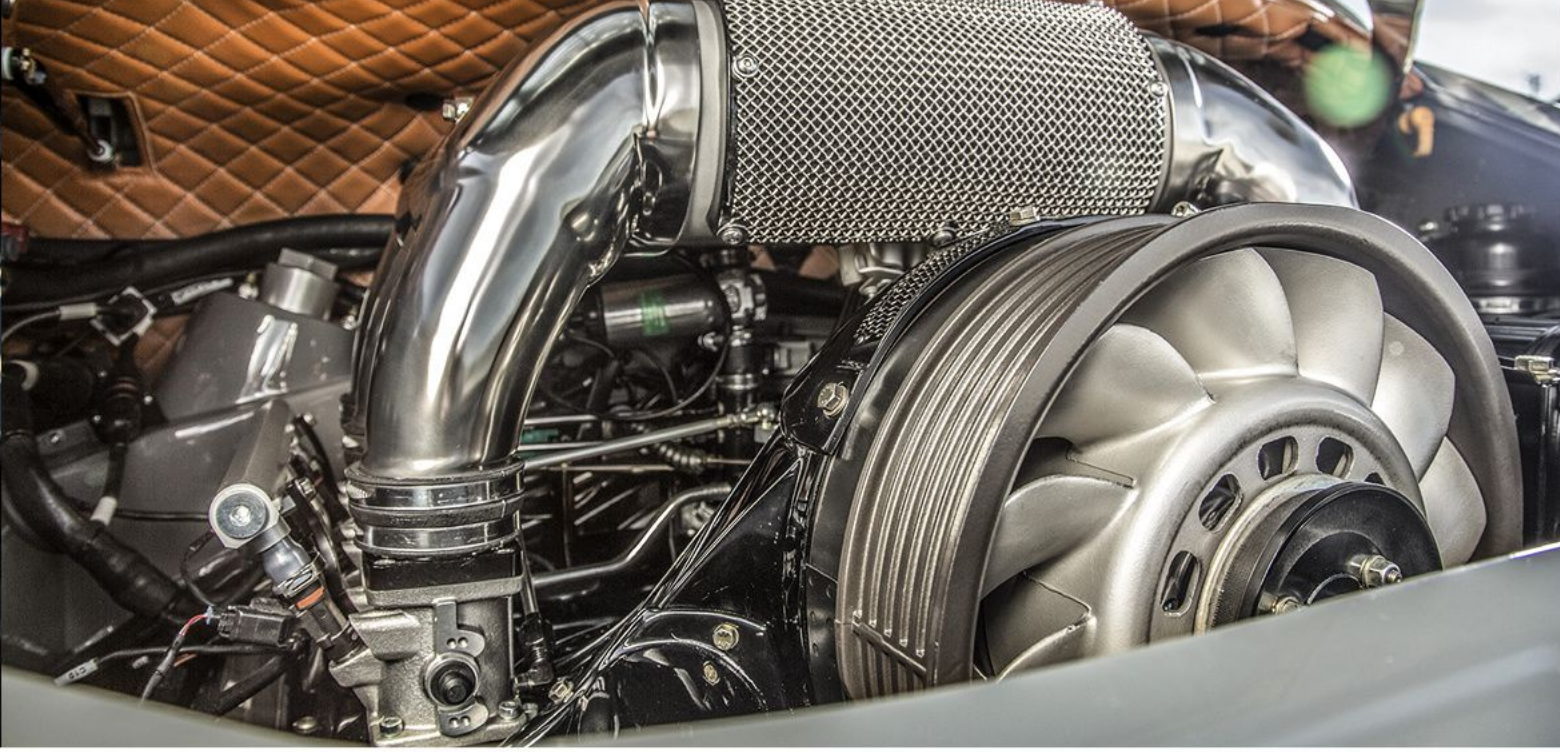
The hours that followed are a blur. We spent much of our time on photography, and I drove in a lot of traffic. The engine behaved impeccably in traffic and always started within a few revolutions. The power steering, one of two racks Singer can install, is direct, almost disturbingly communicative, and light. The car is friendly and dramatic around town, with little of the fore-aft hobby-horsing common to stiffened 911s. The clutch takes up high and firmly, but it's easy to be smooth with. The floor-hinged pedals are dreamy and seemingly frictionless, arcing forward with the gentle flex of your heel.

Gauges (above) are 964 units, refaced for a Sixties/Seventies vibe. Porsche "Big Red" brake calipers (below).

"We spent a lot of time making the pedals work right, thinking about them," Dickinson said. (*Good,* I remember thinking, *unlike everything else.*)

The engine is an elastic ripper. It sounds like someone gave sentience to a trombone full of razor blades, then got it fighting drunk. There is usable torque everywhere, but enough shove near the 7300-rpm redline that you rev it out to feel the cams wake up. Idle is a pleasing thrum, building to a light boominess around 2000 rpm. After that, a snarling f***howl to redline.

"We usually have to remind new owners to shift into second



on their first drive," Frahm said, "because they can't stop looking around the cockpit." Either that, or they're basking in the yawp. The buttery, Singer-optimized shift linkage falls into gear with a basso thump. I'd bet money you couldn't pull it from the car with a locomotive.

Astonishingly, wind and road noise are faint. Company test driver Seamus Taffe is said to spend at least a week per car chasing noises, tweaking door seals and obsessing over fit. (*Good,* I remember thinking, *unlike everyth . . .*)

In summary, imagine that the whole of German culture was a single craftsman. Then pretend that this person read every stereotype about them and decided to silence the haters. ("You think we make maniacal stuff? F***howl Super Beetles über your mother.") No major manufacturer, including Porsche in its golden age, could mass-produce this kind of finish without going broke. Even the last LaFerrari I touched looked worse up close.

After hours of driving like a sane person, I was allowed to rail on it. They gave me the keys, no chaperone, on a lumpy, one-and-a-half-lane road outside Carmel. The pavement wound around grass-covered foothills, gravel at the apexes, an asphalt suggestion draped into narrow valleys like a piece of string. It was every good drive I'd ever had combined with the World Rally Championship videos I play in my head when I can't sleep. And the feeling of being in thrall to something timeless.

Since the suspension is adjustable, there's no one answer for how a Singer-modified car handles. But assuming MacNeil's example was representative, here's a glimpse: Drive tentatively, the car is uneasy. Mild understeer. If you go bonkers but mind the

Modified 997-chassis 911 GT3 intake (above). Mesh hides air filter, lets out giant sucking sound. Engine grille (below), drilled plexiglass baffle.





The hills outside Monterey, a 911, a magazine editor weak in the knees.

front tires, it turns neutral, but that weird 911 neutral, where you have to treat the throttle like a light switch to get anything done, the rear bumper alternately yawing or nailed down. You eye pavement changes, hiccuping your right foot as the car plunges into a hollow, a dump of throttle and camber there to catch it. The steering gives hints of fuzziness when a front wheel is in the air or moving into brake lockup. And there's the standard old-911 gift—on lumpy pavement, the nose can get so light, the wheel barely seems to work.

It's a strange magic: Fast but viceless, precise but sloppy. And mesmerizing. All with that snarling weapon behind you, romping its heads off.

If you are me, you get a few miles in, turn around, and head back to where Singer's guys are waiting. You feel joyously alive and twitching. You roll down the window and relay this glory to the man responsible for the chassis. Also maybe the fact that earlier, driving slowly, you were a tad underwhelmed.

"It's more of a gallop setup," he said, smiling.

"I'm not getting out," I said, "unless you have a gun."

A month before this test, I was asked to meet with one of Singer's lawyers. Over dinner in Detroit, he gently requested that we call the car a "Porsche 911 Reimagined by Singer Vehicle Design," and not the Internet name—Singer first, model second. Stuttgart lawyers, he said, are fond of their trademarks, and the 911 must never be portrayed as someone else's work.

Stuttgart lawyers can eat a box of rod bolts. Only the brain-dead would see this car for anything but what it is: a Porsche-fied old Porsche with some Porsche on top. It's also a more even-handed proposition than any old 911 I've met—countless hours have been spent in tribute to the machine's core appeal, killing the bad bits and cranking the good ones into Technicolor. It's a concentrated animal, and it reminds you just how much the car world has changed lately—not always for the better.

If I'm being honest, I could probably dig deep in my heart and find a flaw, somewhere, in the crevices of Singer's work. But I don't want to. What I do want is that road and that exact car for the rest of my life.

Which makes it good that Dickinson charges what he does. Because if you could bottle that feeling and price it for the masses, you'd run the whole blessed world.

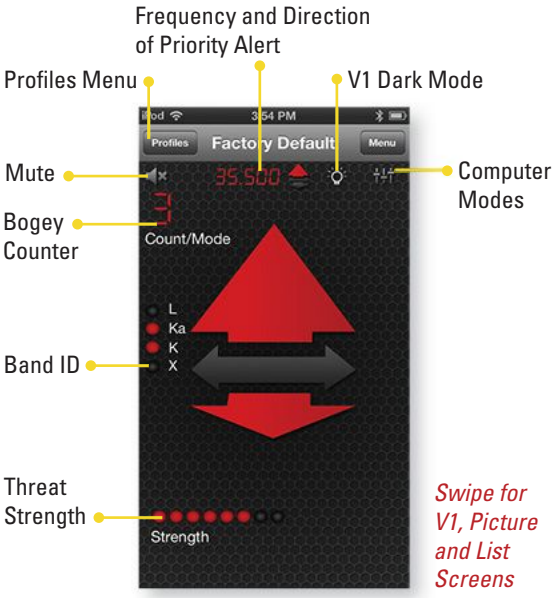
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THE TRACK

MAZDA RACEWAY LAGUNA SECA | MONTEREY, CA
2.24 MILES | 11 TURNS | 180 FEET OF ELEVATION CHANGE


pepsi







FROM LEFT: Singer test driver Seamus Taffe. Dickinson. A sound best described as "holy mother."

TO DATE, NO OTHER PUBLICATION has been allowed to test a Singer-modified 911. Our scales showed 2743 pounds, about as much as a Scion FR-S. Skidpad grip is 0.93 g, and 60 mph passes in 3.3 seconds. That is a shocking 362 pounds less than, 2.1 seconds quicker than, and 0.08 g over the 247-hp 964 Carrera 2 we tested in 1990. The new Corvette Z06 hits 60 in the same time but weighs 793 pounds more. Given that MacNeil's car retains A/C, a stereo, power steering, four seats, and a hushed interior, this is impressive.

MacNeil asked that one of his Tudor series drivers, 31-year-old Leh Keen, set a lap time at Mazda Raceway Laguna Seca. We weren't going to tell him no. Singer's crew delivered pallets of tires (Nitto NT01 and Hoosier R7 race rubber) and began obsessing over dampers and ride height. Fun fact: Each Öhlins shock offers 40 clicks of adjustment. Fun fact part two: They did not mess with them much.

After a morning's testing, Keen popped a 1:35.5. That's 7.5 seconds off the fastest lap in Laguna's last 911 GT3 Cup race, but 0.75 second quicker than we've seen a Ferrari 458 Italia lap with a pro driver at the wheel.

"It did it over and over again," Keen said, parked on pit road. "A lot of street cars, they just go away into oversteer. You can drive this like a race car—give a little more, it gives you a little more." He then left in a dump-clutch launch, the engine all *gruffaWHONGA,* and went to drift down the Corkscrew for photographer Evan Klein. The noise made my kidneys itch.

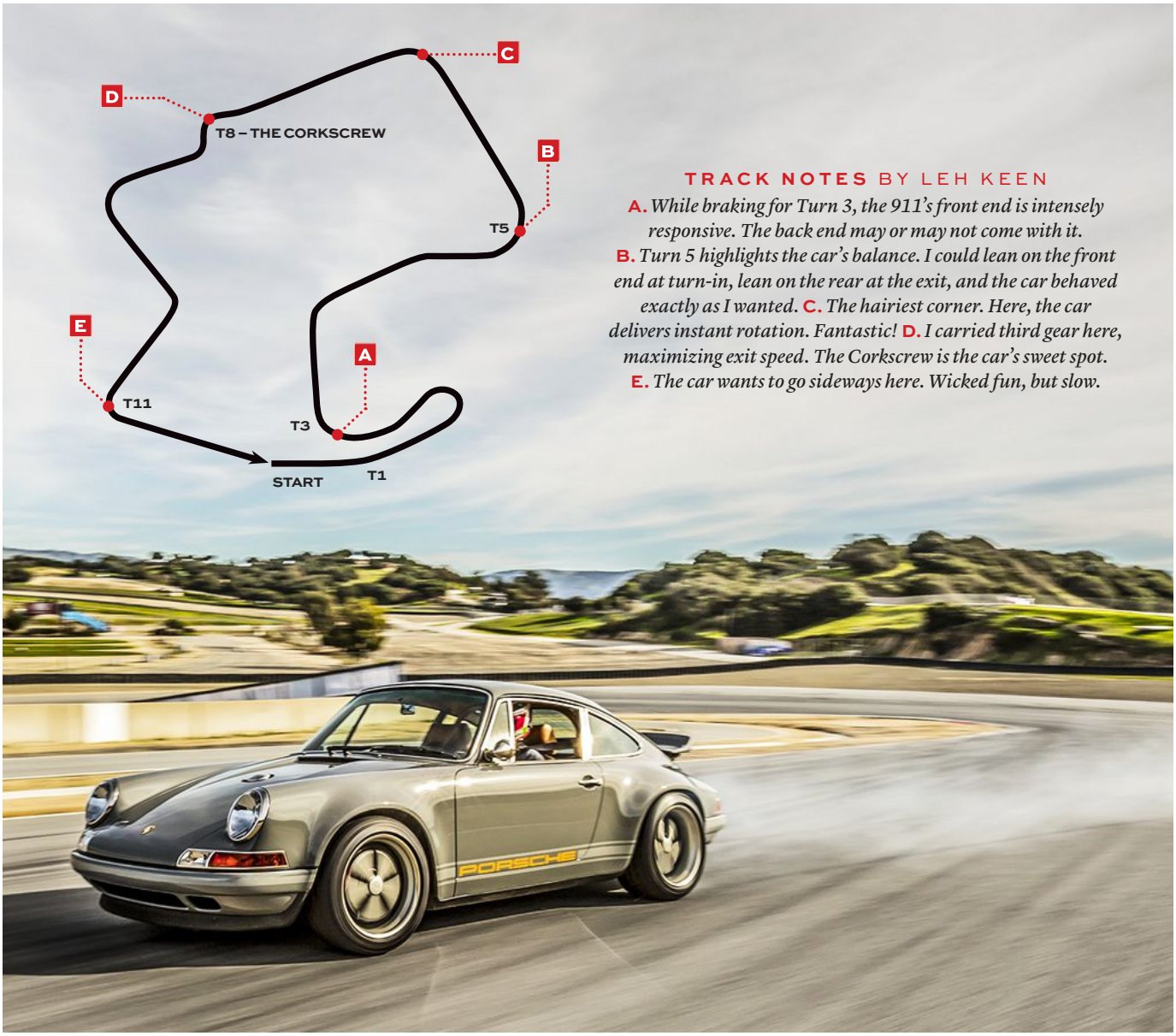
Nothing feels like an old 911 at Laguna. The track is wide and fast, but the landscape makes it seem narrow, so you can do silly things in safety and retain a sensation of speed. And old 911s just prompt silly things. I climbed in after Keen's lapping. It took me a few minutes to put the couture visuals and tired Hoosiers out of my mind. (Truth is, I liked the Michelin PS2s better and wish I'd tried them on the track—it would've been slower, but there was more jazz when the car lost grip.)

But the speed didn't matter. MacNeil's car was loose when I wanted, tidy and predictable when I didn't. You could bend it into a corner on the brakes like any 911, cleanly pinning the nose, chasing tenths like a science experiment. The car was always there, always forgiving, almost free of roll yet compliant enough to stay perpetually calm. The engine, removed from the constraints of speed limits, was so gut-wrenchingly addictive, it felt wrong. Wicked response, gargling on the overrun. Third gear would occasionally smoke the tires in a straight line. The whole car seemed weightless.

Just after Rainey curve, Laguna's downhill, off-camber left, I was reminded of the old line about 911s: They do exactly what you ask, even if that's the wrong thing. Moments later, I turned in early for Turn 11 on purpose. I felt sheepish but knew I wouldn't have another chance, so I lifted, waited for the rear

Wicked response, gargling on the overrun. Third gear would occasionally smoke the tires in a straight line. The whole car seemed weightless.





TRACK NOTES BY LEH KEEN

A. While braking for Turn 3, the 911's front end is intensely responsive. The back end may or may not come with it. B. Turn 5 highlights the car's balance. I could lean on the front end at turn-in, lean on the rear at the exit, and the car behaved exactly as I wanted. C. The hairiest corner. Here, the car delivers instant rotation. Fantastic! D. I carried third gear here, maximizing exit speed. The Corkscrew is the car's sweet spot. E. The car wants to go sideways here. Wicked fun, but slow.

to jack, and whacked my foot back into the throttle. The 911 wound its tail toward the curb in a happy little smear of a slide, and I flung the lever into third gear.

My body felt warm and gooey, like melted caramel. It was time to stop. I did a cool-down lap, parked in the sunlight, and sat there inhaling the interior. Which is when I saw Dickinson walking over, clapping and grinning like a shot fox.

"We just want people to *drive* the damn things," he said.

A few weeks after Laguna, a friend asked me if Dickinson's cars were "worth it." If a Singerized 911 is a sort of Porsche tribute band, he said, would I prefer one over the older, more expensive stuff it salutes?

At the risk of being crass, it depends on how you like to park your money. The average Singer customer spends well north of the $390,000 starting price to have their car restored. If you can afford that, you can probably swing an investment-grade vintage 911—a 934, maybe a 2.7 Carrera RS. That experience would be arguably more pure, because those cars are singular and historic. They built the legend, and no one's making any more.

Personally, though, if I owned those things, I'd want to drive them. In an age when classic-car values can discourage actual use, that's no small thing.

The car on these pages is special but ultimately reproducible. If you kill a 2.7 RS in an accident, history dies. Porsche 964s fall off trees by comparison; murder one of Dickinson's, he'll make you another, with soul like the RS but far more comfort. It's the ultimate kind of luxury product—an ordinary object allowed to become the most impractically great form of itself. It's also a simplification, and simplified things are inherently satisfying.

Paradoxically, all of this comes from a guy who eschews complex answers. Like brass-plated aluminum lug nuts, which our test car has. When I noted their yellowish glint during photography, Dickinson almost looked embarrassed.

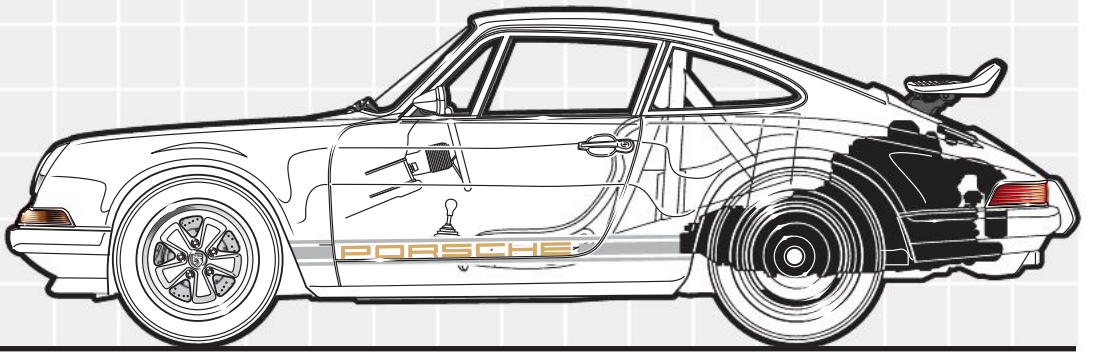
"Yeah. They look too precious off the car, but once they're on . . ." He shrugged. "They just pop, you know?"

You don't expect to like someone who makes precious wheel lugs. But he's just a guy in love with the idea of a car. And when you drive the thing, you go right along with him. ■

Special thanks to David MacNeil.

OFFICIAL PERFORMANCE TEST REPORT

1990 PORSCHE 911 BY SINGER VEHICLE DESIGN



SCALE: 10 IN. DIVISIONS
ILLUSTRATION BY TIM BARKER
© ROAD & TRACK/HEARST MAGAZINES

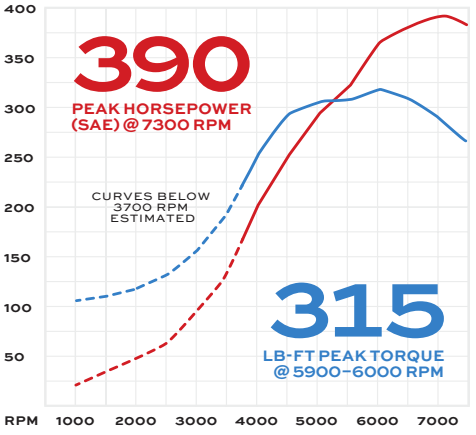
SPECIFICATIONS

COST

MODIFICATIONS ONLY	$575,000

ENGINE

LAYOUT	rear, longitudinal
CONFIGURATION	H-6
INDUCTION	naturally aspirated
MATERIAL	aluminum block and heads
VALVETRAIN	SOHC, 12 valves
DISPLACEMENT	3940 cc
BORE x STROKE	102.0 x 80.4 mm
COMPRESSION RATIO	11.2:1
REDLINE	7300 rpm
FUEL DELIVERY	port injection



TRANSMISSION

DRIVEN WHEELS	rear
TYPE	6-speed manual
FINAL-DRIVE RATIO	4.00:1, limited-slip differential

GEAR	RATIO	MAX SPEED (RPM)
1	3.82:1	36 mph (7300)
2	2.05:1	67 mph (7300)
3	1.41:1	98 mph (7300)
4	1.12:1	123 mph (7300)
5	0.92:1	150 mph (7300)
6	0.78:1	176 mph (7300)

STEERING

ASSIST	hydraulic
RATIO	16.5:1
TURNS, LOCK-TO-LOCK	2.8
TURNING CIRCLE	38.5 ft

SUSPENSION

FRONT/REAR	strut-type/trailing arm

BRAKES & TIRES

FRONT	12.7-in vented rotors, 4-piston fixed calipers
REAR	11.8-in vented rotors, 4-piston fixed calipers
TIRES	Michelin Pilot Sport PS2
SIZE	F 225/45R-17 R 265/40R-17

BODY & CHASSIS

CONSTRUCTION	unit
MATERIALS	steel and carbon fiber
LENGTH	163.0 in
WIDTH	69.0 in
HEIGHT	49.3 in
WHEELBASE	89.4 in
TRACK F/R	57.8/59.3 in
DOORS/SEATS	2/4
CARGO CAPACITY	7.5 ft³
DRAG COEFFICIENT x FRONTAL AREA	—

WEIGHT

CURB WEIGHT	2743 lb
DISTRIBUTION FRONT/REAR	40/60%
WEIGHT-TO-POWER	7.0 lb/hp

FUEL

CAPACITY	19 gallons
RECOMMENDED FUEL GRADE	premium

TEST NOTES

- *For the Laguna Seca lapping session, the Singer crew replaced the Michelin PS2 road tires with Hoosier R7 slicks.*
- *Light weight and rear bias make for stunning acceleration figures: The test car's 0–60 time matches the 2015 Corvette Z06's, and the Porsche is only 0.2 second slower in the quarter-mile.*
- *The slick, 993-era gearbox allowed our test driver to make consistent quarter-second upshifts.*
- *We stopped from 60 mph 22 feet shorter than in our 1990 Carrera 2 test; from 80 mph, a whopping 40 feet shorter. Credit bigger brakes and modern rubber.*

TEST RESULTS

3.3
0–60 MPH, SECONDS

11.7
0–¼-MILE, SECONDS @ 119.2 MPH

176
TOP SPEED, MPH (MFR)

0.93 g
ROADHOLDING, 300-FT SKIDPAD

ACCELERATION

1 FOOT (ROLLOUT)	0.3 sec
60 FEET	1.6 sec
ROLLING START, 5–60 MPH	3.7 sec
1/4-MILE	11.7 sec @ 119.2 mph
0–10 MPH	0.2 sec
0–20	0.7
0–30	1.1
0–40	1.8
0–50	2.5
0–60	3.3
0–70	4.3
0–80	5.5
0–90	6.6
0–100	8.2
0–110	9.8
0–120	11.9
0–130	14.4
0–140	17.4
0–150	21.8
TOP SPEED (REDLINE-LIMITED, MFR)	176 mph

BRAKING

60–0 MPH	114 ft
80–0 MPH	196 ft
FADE	none

HANDLING

ROADHOLDING	0.93 g
BALANCE	mild understeer

Shell V-Power Premium Gasoline | The official fuel partner of Road & Track





THE ROAD & TRACK TEST | 2014 TESLA MODEL S P85D

CLIMATE CHANGE

CONNECTICUT IS A LONG WAY FROM SILICON VALLEY. CAN ELON MUSK'S CALIFORNIA DREAM SURVIVE LIME ROCK ON ICE?

BY **JASON CAMMISA** | PHOTOGRAPHY BY **SEAN KLINGELHOEFER**



THE ROAD

SAN FRANCISCO, CALIFORNIA

NOT EVEN A YEAR AGO, I listened patiently as an arrogant German executive dismissed the Tesla Model S as not quite a real car. "Venn vas the last time," he gutturaled, "you haf seen a Tesla drivink on zee street?"

Today, as I wait at a stoplight inside a red Tesla Model S P85D test car, two other red Tesla Model S sedans drive past. Followed by a black one. And then a silver one. Tesla has sold some 70,000 copies of its groundbreaking sedan, and judging by how thick they are on the ground in California, you'd think all of them had been delivered within a half-mile radius. You can't go three blocks without seeing a Tesla drivink on zee streets of San Francisco. Or cruisink in Los Angeles. Or, thanks to the Supercharger charging stations Tesla's put in the desert, travelink anywhere in between. The Model S has become the affluent man's California Camry.

When the light turns green, the P85D bursts forward with a violence you'd have to see to believe. It's already 20 mph over the speed limit by the time it crosses the intersection. The ordinary-looking four-door rips to 60 mph before it has traveled 200 feet, something few gas-burning automobiles can do, and in a way





Silent but violent: The P85D is the ultimate urban assault vehicle. Fast as a supercar but so quiet and ubiquitous, nobody notices it.

no gas-burning car has ever done: silently. Not a single pedestrian shoots a dirty look. No one grabs their children and runs. The cop eating a sandwich across the street doesn't turn around. Seeing may be believing, but hearing gets you noticed in the first place. And since no one notices the Tesla or its ludicrous acceleration, you can use all of its 691 hp with impunity from every stoplight. The P85D is the quickest car in the world.

Don't turn to the spec page just yet. We need to talk numbers right off the bat, starting with those on the badge. The "P85D" on this otherwise normal-looking Model S means it's the mack-daddy version: P for performance, 85 to signify the 85-kWh battery pack, and D for dual motors.

There's a small motor, rated at 221 hp, nestled just in front of the firewall, occupying a chunk of the Model S's frunk space. The big motor from the old P85 drives the rear wheels, and its output has jumped by 54 hp, to 470 hp. The combined outputs of the two motors give the P85D its 691-hp total power rating. Had Dodge not just stuffed its 707-hp Hellcat engine into a Charger, the P85D would be the most powerful sedan ever made.

There's no fussy launch control to deal with here, no brake-torqueing or fancy technique required. Just bury the throttle, and—wait, electric cars have no throttle . . . Mash the gas peda—*apply pressure to the accelerator-pedal potentiometer* and you'll hit 60 mph from a standstill in 3.3 seconds. The quarter-mile comes in 11.8, at 114.5 mph. Those are very big little numbers. In fact, they edge past those of the Porsche Panamera Turbo, meaning the P85D would have landed right in the middle of this magazine's last superfast luxury-sedan comparison ["V-8 Supercars," March/April 2014].

So how, then, is the P85D the quickest car in the world? Easy. You can't compare electric cars directly with gasoline-powered cars in the real world. Test numbers apply only at the drag strip; when you're dealing with changing conditions, other cars, and pedestrians, numbers are meaningless. An electric car responds so differently that comparing it to a gas car is like staging a water-boiling race between a Bunsen burner and an M-80 dropped in a toilet.

Only part of this difference is due to motor response. The bigger factor is gearing. Piston engines typically produce maximum power just before they pop. Their reciprocating parts—pistons, connecting rods, valves, and the like—are subjected to forces that grow exponentially with rpm. There's a limit to how quickly the whole thing can spin before it blows. You and I know this as the redline on a tachometer.

Because of those damaging forces, piston-powered cars require multiple gears to keep the engine below redline at all times. Since noise and vibration and fuel consumption also rise with engine speed, transmissions keep engines spinning as slowly as possible. If a driver suddenly requests maximum power, the car has to first engage the lowest possible gear, spin its engine to the corresponding speed, and then apply full power. These days, that last step increasingly involves waiting for a turbo to spool. All this takes eons.

With no reciprocating parts, electric motors can spin much more quickly and aren't significantly less efficient at high rpm. And they make peak power at low speeds rather than near redline. As a result, they only need one gear. There are



Simple design, so-so build quality, but that screen rules.

no downshifts—the jump from economical cruising to ballistic acceleration takes milliseconds. In the real world, by the time a Panamera Turbo's powertrain has registered its driver's request for power—much less done anything about it—a P85D would be pulling away. But forget about Panameras. This Tesla can pick a fight with a snoozing Lamborghini and leave it for lunch meat. Tormenting supercars never gets old.

Mind you, the Model S has a lot more going for it than just being electric and fast. Now in its fourth model year, Tesla's sedan is aging gracefully, though it's certainly due for a face-lift. Still, the hatchback silhouette looks like a slightly desexed Audi A7 and offers fantastic cargo versatility and a spacious cabin. Interior fit and finish is far from Audi levels, but it has improved noticeably since the last Model S we examined ["Return to Power," April 2013].

Our P85D tester was fitted with Tesla's Next Generation seats, which are optional, adjustable, well-bolstered, extremely comfortable, and made by Recaro. The dashboard still largely eschews buttons for an enormous, 17-inch capacitive touchscreen. No other automobile has matched this display in size, ease of use, or responsiveness—and regular software updates have enhanced usability and readability. It's the best touchscreen out there, but we still want physical buttons to control things that you use often, like the door locks and the optional glass panoramic sunroof.

The Model S lineup now offers key features you'll find in big-boy luxury sedans, including autonomous braking, adaptive cruise control, blind-spot monitoring, and lane-keeping assist. And a few you won't, like Smart Air Suspension, which remembers where you raised the suspension—say, to enter a particularly steep driveway—via GPS and automatically adjusts ride height as you approach that location again. Unfortunately, the Model S still lacks some features buyers in this segment consider mandatory, such as air-conditioned seats. Not to mention the storage binnacles you'll find in the interior of every other car.

Tesla benefits from 125 years of automotive R&D paid for by its competitors.

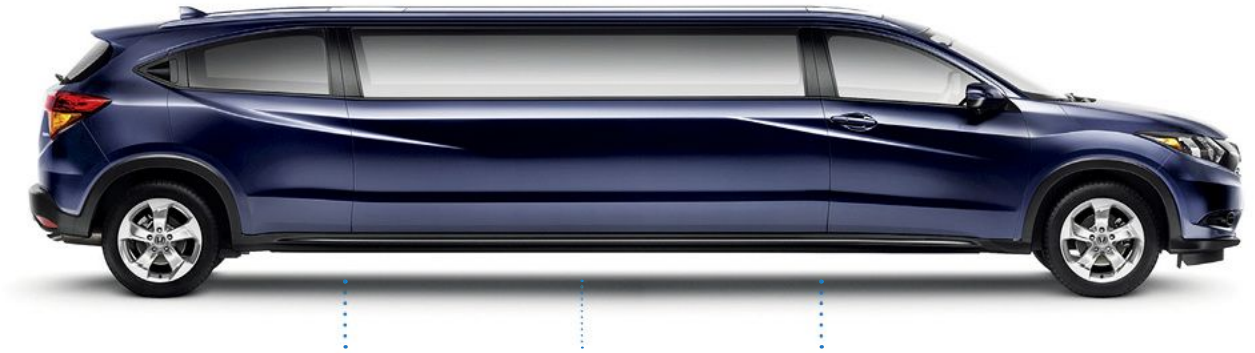
There is, however, little to fault with the driving experience. Carmakers love to boast that the black art of the automobile is understood only with decades of experience. The Model S disproves that. But no matter how much the company fancies itself an out-of-the-box thinker, the reality is that Tesla has benefitted from the collective knowledge of 125 years of automotive R&D paid for by its competitors. Electric motors, battery, and touchscreen aside, the Model S was created with preengineered, off-the-shelf solutions from proven industry suppliers. What Tesla did right was to choose the best of each. From the stout double-wishbone front suspension to the monoblock brake calipers, it's all the finest stuff money can buy.

The P85D's electrically assisted steering offers three levels of boost, and especially in Sport mode, it feels remarkably natural. Tesla's decision to forgo a blended braking system was prescient—other companies are just now realizing that this was



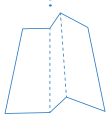
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Big isn't the only way to get versatility.



PRESSURE TO GET BIGGER IS UNRELENTING
THE NEW HUNGER MAKES CARS RESEMBLE AN R-V
CROSSEYED, WE CONCEDE THE BATTLE IS OVER

2 ► fold page so 1 meets 2 ◄ 1



Honda reminds you to properly secure items in the cargo area.
HR-V EX-L Navi model shown. ©2015 American Honda Motor Co., Inc.

HONDA



We certainly did not jump the P85D on the streets of San Francisco. That would've been irresponsible.

the answer. The Model S applies maximum regen when you get off the accelerator, meaning you usually don't have to touch the brake pedal until you're at a near-complete stop. When you do require the friction brakes, the pedal is firm and responsive. That's no surprise, given the lack of hybrid-system nonsense in the linkage and the fixed calipers, which straddle enormous conventional steel rotors.

They have to be large. At a hefty 4933 pounds, the dual-motor P85D weighs 182 pounds more than the already-heavy rear-drive P85 we tested in 2013. Since most of that additional mass is up front, weight distribution improved from 47/53 percent front/rear to an even 50/50. In our testing, roadholding increased from 0.86 g to 0.89 g, and braking from 80 mph to a stop decreased by 18 feet, though much of that difference is likely attributable to the tires—our P85D was wearing aggressive Michelin Pilot Sport PS2s on staggered 21-inch wheels.

THE TRACK

LIME ROCK PARK | LAKEVILLE, CT

MAYBE YOU FANCY THE IDEA of taking a 5000-pound luxury sedan to the track. We certainly do. Problem is, that would be asinine. If Tesla has one thing over the traditional automakers, it's purity of intent and clarity of purpose. The Silicon Valley startup has made no claim that the Model S is trackworthy. The reality is that people don't go lapping in $130,000, futuristic luxury sedans, and electric passenger cars just don't work on tracks—their batteries can't sustain the output required without overheating.

And yet logic has never stopped us from tracking a car that had no business being tracked. One of the worst winters on record couldn't stop us either, thanks to Lime Rock Park in Connecticut, where acute cabin fever converged with snow-making equipment to create the coolest thing to happen to winter since winter itself: the Winter Autocross. This isn't a parking lot with cones. It's a 1200-foot-long treatment for seasonal affective disorder, replete with cambered, decreasing-radius corners, steep grades, and only snowbanks to hit. In other words, it's ice-encrusted heaven. And it's open to the public almost every weekend from January through early March. There may be nowhere on earth to better track-test an all-wheel-drive electric car powerful enough to spin its tires at 100 mph in the snow.

Alas, we have to get there first. That part isn't a given in an electric car. Heading into the Berkshires in the middle of winter is nothing like driving in San Francisco. The vivid colors of California are replaced by 52 shades of gray, all of which are frozen solid. And potholed. Horribly, horribly potholed.

Mother Nature, road salt, and frost combined forces to demonstrate just how oversized the P85D's 21-inch wheels are. Our test car's winter tires—Pirelli Sottozero 3s—feel like they're filled with ice, and the steady stream of impacts fills the cabin with an arrhythmic, pounding bass line that attempts to drown out the upgraded stereo's eight-inch subwoofer. In these conditions, the Model S would benefit from smaller wheels and a bigger sub.

A more powerful cabin heater wouldn't hurt, either. Our P85D lacks the Subzero Weather package, meaning it does without a heated steering wheel, and with temperatures hovering around zero, the cabin never gets toasty. Not that the Tesla isn't trying—the dash display shows the HVAC system is using almost 10 kW of power just to generate heat. That's a draw big enough to empty the battery of most other electric cars in less than two hours. While parked. The P85D's battery is so big that even in these conditions, we can still go almost 200 miles on a charge, heater on full blast. That's all that needs to be said about range anxiety.

When Tesla found out that we wanted to snow-race the P85D, it installed an 80-amp, 220-volt charger at Lime Rock. When we arrive at the track, it takes us a few minutes to find the device—a Wonder-Bread-sized box stuck to a chain-link fence that, amusingly, is next to the on-site gas station. Before

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plugging in the P85D, we attempt a few slides around the snow-covered parking lot. It's here I realize that there's no way to disable stability control.

Panic ensues. I disassemble half the car to access the computers and wiring. Fuses are yanked, ABS control units unplugged, and wheel-speed sensors disconnected. The P85D counters by entering a fail-safe front-wheel-drive mode and flashing every error message imaginable. I fully expect an enraged Elon Musk to appear on the touchscreen, screaming at me while he remotely shuts down the car. That doesn't happen. But I also never free the car from its electric prison.

What if the driver's intent is to have fun? To be sideways with four roostertails of snow in the world's quietest drift?

As the P85D sits on the charger overnight in preparation for the next day's test, I phone Tesla HQ in Palo Alto, California, and beg an engineer to beam over a software patch. The answer is no. I call the engineer a spineless killjoy, then threaten to aim the P85D at a snowbank and test its autonomous braking system. The poor guy explains that Musk doesn't like turning stability control off. "Oh," I argue, "so the man who owns a hairy, scary McLaren F1 doesn't want to be spooked by his own electric sedan?"

Evidently, it's impossible to frazzle a Tesla engineer. He patiently explains that the P85D beat a Panamera in internal benchmarking in the snow and that they've programmed the P85D to "faithfully follow driver intent."

And what, I ask, if the driver's intent is to have fun? To be sideways with four roostertails of snow in the world's longest, quietest drift? He says I'm very likely the only Model S driver who would ever want this. He may have a point. The conversation ends with me convinced tomorrow's snow-course session will be one big festival of slow.

Cold slow, because it's 3 degrees the next morning when I return to the car. Icicles (Teslicles?) dangle from every body panel. The P85D boots right up, although the battery display, now adorned with a snowflake, shows the pack has lost five percent of its charge overnight, presumably in keeping itself from freezing solid. There's a "Regenerative Braking Disabled" message, too, and maximum power is limited to 75 kW, or 101 hp.

It takes no longer for the snowflake to disappear from the display and for max power to creep back to "normal" than it would to warm up a gas engine. The nav map, however, remains blank for some time. The Model S doesn't store maps onboard but instead uses Google maps, which it downloads via a cellular connection. If a connection is available, that is.

No maps are necessary for Lime Rock's Winter Autocross course. Nearly the entire track is visible from the staging area, and watching cars make their way around is like being at WRC Rally Finland. Except it's colder here, people don't talk funny, and the cars are ill-suited to the task. There's a BMW i8 that patently refuses to drive in a straight line. A Fiat 500 that gets stuck every 12 seconds. And there's the guy swinging his Chevy Silverado sideways on corner entry with no fear of tasting side-curtain







The black M5 in the background is quick but hasn't a snowball's chance in hell against the P85D.

airbag, then carrying a perfect four-wheel monster-truck drift for 50 yards. He's catching everyone, especially over the center section, which is becoming increasingly rutted as car after sideways car flies through. With only a few vehicles on track at any time, it takes a while to figure out who's fastest.

That turns out to be a black E60-chassis BMW M5, license plate TRAKDAY, showering everyone with the haunting wail of its 8250-rpm V-10. Not to mention the two beautiful streams of snow being thrown 50 feet into the air by the car's aggressive Nokian Hakkapeliitta snow and ice tires. When I finally manage to pull onto the course behind it, the P85D lunges toward the Bimmer like it's going for the kill. Then, I turn the steering wheel and the computer pulls the plug. Curses fly. Every corner-entry Scandinavian flick gives a glimpse of the P85D's neutral handling just before it's extinguished by stability control. There's no point fighting it—the fastest way around the track is with your foot on the floor, minimizing steering inputs and allowing the computer to do all the work.

It's infuriating knowing there's a brilliant chassis here and not indulging it.

It's infuriating to know there's a brilliant chassis here but not being allowed to indulge it. It's also shocking how fast the P85D is despite all this—it catches the M5 within a few corners. With me riding in his wake, the BMW driver pushes even harder but only gets more sideways. It's a joy to watch, but the M5 is not nearly as capable as the Model S. No car here is—the P85D is so much faster than the other cars, I wind up tormenting them like those Lamborghinis back in California. Only this time, it is no fun at all.

Once I'm fully convinced of the Tesla's dominance, I park it and jump into our photo-support vehicle. Its traction-control button, which doesn't even require a long press, instantly illuminates every maniac's favorite orange dashboard warning light. I'm already sideways by the time all four wheels are on the course; approaching the first corner, I lift, flick the wheel, then mat the gas. The V-6 screams, the center diff engages, and I'm smiling so widely, my chapped lips bleed.

Turns out, a Nissan Murano is the drift machine I so badly wanted the P85D to be. For a few laps. I park it when the CVT emits a terrible smell. Sorry not sorry.

Other participants walk over to share the moment. Two of them own Teslas but didn't bring them. They'd read Internet posts from other Lime Rock Winter Autocrossers who'd come the week before, only to find that a recent software "upgrade" removed the stability-control defeat procedure.

That poor Tesla engineer wasn't kidding about the P85D being seriously fast in slippery conditions, but I wasn't wrong in thinking that actual Tesla owners would want their cars to get sideways. More important, anyone claiming the Tesla "isn't a real car" is officially out of touch. The Model S isn't just ubiquitous in California and Connecticut—other financially secure parts of America are slowly becoming spattered with them. You can't call Tesla's sedan a West Coast fad anymore, because it's more than a fast car and certainly more than a mere electric car. It might be more fun in some conditions, but as far as we're concerned, the Model S is the world's quickest car, regardless of where you are. ■

PERFORMANCE TEST REPORT ►

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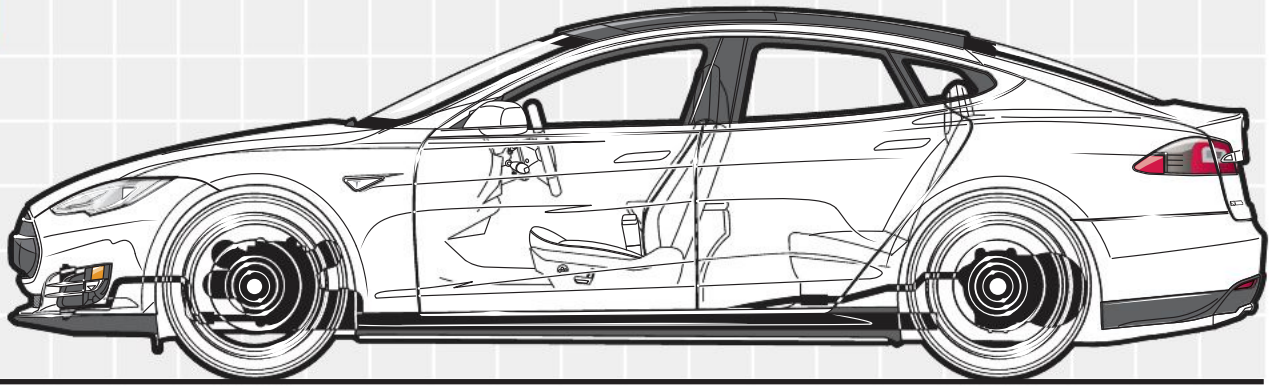
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OFFICIAL PERFORMANCE TEST REPORT

2014 TESLA MODEL S P85D

SCALE: 10 IN. DIVISIONS
ILLUSTRATION BY TIM BARKER
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SPECIFICATIONS

PRICE

BASE	$105,670
AS TESTED	$129,820

PROPULSION

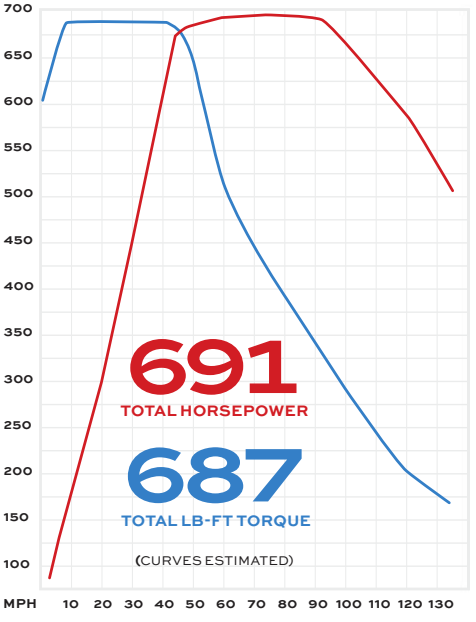
CONFIGURATION	battery electric vehicle
LAYOUT	dual motor, front and rear

BATTERY

TYPE	liquid-cooled lithium-ion cells
LOCATION	under floor
CAPACITY	85.0 kWh

MOTORS

OUTPUT, FRONT	221 hp/244 lb-ft
OUTPUT, REAR	470 hp/443 lb-ft



TRANSMISSION

DRIVEN WHEELS	all
TYPE	single-speed
DRIVE RATIO F/R	9.34:1/9.73:1

STEERING

ASSIST	electric
RATIO	variable, 13.0:1 avg
TURNS, LOCK-TO-LOCK	2.4
TURNING CIRCLE	37.0 ft

SUSPENSION

FRONT/REAR	control arms/multilink

BRAKES & TIRES

FRONT	14.0-in vented rotors, 4-piston fixed calipers
REAR	14.4-in vented rotors, 4-piston fixed calipers
TIRES	Michelin Pilot Sport PS2
SIZE	F 245/35R-21 R 265/35R-21

BODY & CHASSIS

CONSTRUCTION	space frame
MATERIALS	aluminum and steel
LENGTH	196.0 in
WIDTH	77.3 in
HEIGHT	56.5 in
WHEELBASE	116.5 in
TRACK F/R	65.4/66.9 in
DOORS/SEATS	4/5
EPA CLASS	large cars
CARGO CAPACITY (SEATS UP/FOLDED)	31.6/63.4 ft³
DRAG COEFFICIENT	0.24
FRONTAL AREA	— ft²

WEIGHT

CURB WEIGHT	4933 lb
DISTRIBUTION FRONT/REAR	50/50%
WEIGHT-TO-POWER	7.1 lb/hp

EFFICIENCY

EPA CITY/HWY	86/94 MPGe
EPA RANGE	242 miles
MAX CHARGING	10 kW onboard, 120 kW DC

TEST NOTES

- *Launching the Tesla is as easy as stomping on the accelerator—the tires bite immediately and it's gone. There is no launch control, but testing was performed in Insane mode.*
- *The P85D reduces max power after one or two acceleration runs. Multiple full-power runs require a two- to three-mile cool-down cruise.*
- *Fade-free brakes provide consistently short stops, especially impressive considering the curb weight.*
- *The front tires take the brunt of the load on the skidpad, but the P85D is secure and easy to drive at the limit.*

TEST RESULTS

3.3
0–60 MPH, SECONDS

11.8
0–¼-MILE, SECONDS @ 114.5 MPH

133
TOP SPEED, MPH

0.89 g
ROADHOLDING, 300-FT SKIDPAD

ACCELERATION

1 FOOT (ROLLOUT)	0.4 sec
60 FEET	1.8 sec
ROLLING START, 5–60 MPH	4.2 sec
1/4-MILE	11.8 sec @ 114.5 mph
0–10 MPH	0.4 sec
0–20	0.8
0–30	1.3
0–40	1.8
0–50	2.5
0–60	3.3
0–70	4.3
0–80	5.5
0–90	6.9
0–100	8.7
0–110	10.8
0–120	13.4
0–130	16.8
0–140	—
0–150	—
TOP SPEED (GOVERNED)	133 mph

BRAKING

60–0 MPH	123 ft
80–0 MPH	200 ft
FADE	none

HANDLING

ROADHOLDING	0.89 g
BALANCE	moderate understeer

Shell V-Power Premium Gasoline | The official fuel partner of Road & Track

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RING OF FIRE

STUCK BETWEEN MYTHOLOGY AND REALITY, THE NÜRBURGRING FACES AN UNCERTAIN FUTURE. AN AMERICAN LIVING TRACKSIDE UNLOCKS THE GATES.

BY **JOSH CONDON** | PHOTOGRAPHY BY **ANDREAS HEMPEL & DOM ROMNEY**



OVER THE RADIO, the young Russian kid, Dmitry, sounded spooked. He was driving an Audi TT RS in no particular hurry along the Nürburgring Nordschleife's Döttinger Höhe straight as 150-odd race cars of various types slammed and jostled around him. A thick cotton-candy fog obscured all but headlights, winking through the haze.

Dmitry wanted out of the car. Team owner Robb Holland, 46, an American professional driver with thousands of Ring laps under his belt, shook his head and spoke into his radio. "No."

Holland is tall and lanky, a handsome former professional cyclist with a shaved head and a voluble personality. He lives at the Nürburgring half the year as the managing partner of Rotek Racing, and he writes about the experience for various publications, including this magazine. Holland suggested *Road & Track* investigate the Ring at a time when it's struggling to remain true to its history and forge a solvent future—all while marketing twits try to whittle nine decades of death and triumph here into a special-edition badge they can slap on a Toyota Corolla.

Two laps later, the kid repeated the request, and the Audi was back in the pits. Dmitry climbed out and slid off his helmet. He's slight and angular, with high cheekbones and the kind of impassive eyes common to both Russians and birds of prey. When he ran his hand through his damp brown hair, it was shaking.

All places of worship command respect, but at the Nürburgring, the most formidable of the old speed temples, fear is the most appropriate offering.

A HANDFUL OF HALLOWED RACETRACKS still operate around the world. Some are in Europe—Monza in Italy, Belgium's Spa-Francorchamps, France's Circuit de la Sarthe—but there's also Indianapolis Motor Speedway and Japan's Suzuka Circuit. More notorious and unforgiving than all of these is the Nürburgring, the massive, treacherous track that dips and twists through Germany's Eifel Mountains. The Ring has some 70 corners. Many are blind or off-camber, almost all are fast, and it's no exaggeration to say that even a minor error in any one could destroy a car.

The world's most infamous racetrack was originally proposed as a way to save the lives of German cows. The organized public-road racing that flourished in Germany after World War I was a danger to livestock, which often crossed courses to reach grazing fields. Otto Creutz, the track's widely acknowledged father, is reported to have remarked, "I am here in the first place for the farmers and in the second place for the motorists." He had the audacious idea for a purpose-built circuit wending around the farms and fields near Nürburg, a village in the Eifel region south of Cologne.

The plan called for a course of between seven and a half and nine miles, with a price of 1.8 million Reichsmarks. As the size of the proposed track grew, the projected cost ballooned to 5.5 million, then 7 million marks. The German Welfare Ministry, which had agreed to finance the Ring as a make-work program in a country racked by postwar unemployment, became skittish. It was assuaged only when the German auto industry committed, en masse, to renting the track for vehicle testing. All told, construction cost more than 14 million Reichsmarks (a meager $45 million adjusted for inflation) and took 2500 people two years.

In its original form, the finished circuit was a wonder: 17.6 miles, more than 1000 feet of elevation change, and thanks to unpredictable mountain weather, the chance for a driver to face rain, sleet, snow, fog, and sunshine in a single lap. When the Nürburgring opened on June 18, 1927, men began dying there almost immediately. There was no other circuit like it, there still isn't, and it's safe to say there never will be again.

All places of worship command respect, but at the Nürburgring, the most formidable of the old speed temples, fear is the most appropriate offering.

In a few days, Robb Holland would be coaching Dmitry through the 2014 finale of VLN, a Nürburgring-based endurance series, but the morning after I arrived, he was sitting in his kitchen wearing pajama bottoms and an old T-shirt, mainlining car videos from his laptop. Occasionally he perked up at the throaty *blaaaat* of an engine outside. Then he muttered "NSX" or "AMG GT" or the name of some car that wouldn't debut for months, turning his attention back to an incredible feat of racing skill or maybe a moron crashing a Lamborghini into a convenience store.

In many ways, this region hasn't changed in the 88 years since the track opened. Holland calls it "the Kansas of Germany." Some tractor-repair shops have a side business servicing high-performance brake systems, and local mechanics knock door-to-door looking for extra work during race season, but it mostly remains a quiet, rural community. The surrounding area is farmland and rolling green hills. A herd of cows occasionally

THE NÜRBURGRING NORDSCHLEIFE | NÜRBURG, GERMANY
OPENED 1927 | 12.94 MILES | 73 TURNS (33 LEFT, 40 RIGHT) | 974 FEET OF ELEVATION CHANGE







FROM TOP: Legends still haunt the old F1 paddock; the famous Ring graffiti, which can be slick as ice; weather presents its own challenge on the Nürburgring.

loiters on the Rotek house's back patio.

It's a stark contrast to what's beyond the house's front door. Rotek's compound occupies 1–3 Gottlieb-Daimler-Strasse, the first addresses on the long boulevard of garages for the Nürburgring-based development efforts of manufacturers like Audi, Mercedes-Benz, Aston Martin, Cadillac, Kia, and Jaguar Land Rover. Ferrari, Lamborghini, and Bugatti run cars here, too, making Daimler-Strasse the de facto cruising strip for almost every major performance car in development. The rest of the neighborhood is made up of suppliers like Bosch and smaller race shops like Black Falcon.

ABOVE: Robb Holland coaches a driver in the season's final VLN endurance race. RIGHT: Camouflaged cars are a common sight. OPPOSITE: Old-school European charm meets gearhead nirvana.



Rotek set up shop two years ago with an arrive-and-drive program, providing a base of operations for pros or high-level amateurs to race the Nürburgring Nordschleife, the 12.9-mile circuit that survives as the main endurance track. (The Nordschleife, or "North Loop," was shortened from 14.2 miles in 1981, the same year work began on a new grand prix circuit to replace the smaller Südschleife.) Rotek offers clients a race-prepped 2013 Audi TT RS with almost 400 hp or a 2008 wide-body Audi RS4 with 480 hp. There's also a lightly modified BMW Z4 and a tuned Ford Focus RS used mainly for tourist-day drives. Other vehicles are in the works. Drivers can opt for a single race or run the whole VLN series, depending on how much they want to spend. For about $15,000, including flights, customers can move into an eight-bedroom house on Daimler-Strasse with private coaching, four mechanics, and an entry to an honest-to-God, internationally sanctioned endurance race.

"Fifteen grand buys you one race in the lowest Grand-Am class," Holland said. "And guys do it all the time. We figure for the same price, you get to the Ring, there's no language barrier, and all the paperwork and logistics are taken care of. You just get in the car and race the most insane track in the whole world."

There are miles of hiking trails in and around the Nordschleife, all navigable by tracing the scent of scorched brake pads and smoked rubber. One morning I followed Holland into them. We clomped around in the late-October mud to watch manufacturer testing, which accounts for the majority of reserved track time and a major source of Ring revenue.

"Manufacturers say they use the Nürburgring to hone the tuning of their performance cars, but that's bullshit," Holland said. "If you set up a street car to perform well at the Nordschleife, it would be terrible for everyday driving. They're really here to put cars under extreme stress, to test component durability, electronics, stability control, NVH, that sort of thing."

The drivers are part of the so-called Industry Pool of pro wheelmen. During testing season, which runs from March or

April until the weather shifts, usually around late October, these drivers are omnipresent. Walk into any restaurant during a lunch buffet, and most diners will be wearing Nomex suits and racing shoes. The previous day, in a local gym, a stocky guy in his early forties struck up a conversation with Holland's business partner, Roland Pritzker, 37. He introduced himself as Gerko, a test driver for AMG, and offhandedly mentioned driving the ultrasecret Mercedes-AMG GT race car, which had yet to be unveiled. Noticing the shocked look on Pritzker's face, Gerko laughed and said, "Driver gym," before pointing at other men around the room. "BMW driver, AMG driver, Jaguar, Audi," he said. He added with a shrug, "Driver town."

If the manufacturer testing going on that week was a safari—glimpses of exotic beasts as they hammered past—the weekend's VLN qualifying was an invasion, a deafening assault of carnage. There were 164 cars on the starting grid for the final race. A high-speed parade past Bergwerk curve showcased racing versions of a Bentley Continental, various Porsches, a Toyota GT 86, a Mercedes SLS AMG, and an achingly beautiful Ford GT. The sheer variety of cars here makes spectating seem like watching antelope running with buffalo running with house cats.

At Brünnchen corner, a popular tailgating spot, we encountered a small city of RVs. On a hill overlooking the track, an inflatable pool had been turned into a makeshift hot tub. The cowboy boots and bare shins of an enthusiastic drinker dangled over the side as a German-language version of "Ring of Fire" blasted from a boom box. Two hundred people cracked tall cans of beer and sang and tended to small bonfires. Large white signs reading Caution: Danger to Life! were posted next to unlocked gates. Spectators casually climbed down to the track to snap pictures.

This was the vanguard for the 25,000 people who arrived to watch the season's final VLN race. That number is dwarfed, Holland said, by the 24 Hours of Nürburgring in May, when more than 250,000 people descend on the village of Adenau to buy all the milk, bread, sausages, firewood, and every last available beer in the supermarket, which is not an easy thing to do in Germany.

There must be tremendous money coming through here, I suggested. Yes, Holland agreed, there is. The problem is, no one knows how to take advantage of it. For example, a disused roller coaster reaches into the sky about a mile from the track's old Formula 1 paddock, a concrete plaza of garages still bearing signs with names like Rindt and Prost and Hunt. The coaster, which opened in 2009, was only operational for a few weeks and ridden mainly by locals who were attracted by the novelty. The Ring Racer, as it's known, was part of an ambitious, decade-old plan to transform the track into a family-friendly theme park. Holland likened it to the secondary economy of a ski town.

"Even if the wife and kids don't ski, they can still enjoy a place like Vail or Aspen. There's shopping, restaurants, movie theaters. They thought the same thing could be built here at the Ring," he said.

Despite substantial investment by the local government—reportedly over $600 million—in a new hotel, restaurants, the coaster, and a sprawling Ring Werk complex meant to showcase other attractions, those families never appeared. Holland says it was due to a misunderstanding of the driving-enthusiast mentality, similar to that of golfers and hunters, in that time away from family is often considered a collateral benefit. Now, the cavernous Ring Arena houses a few offices, a Nissan showroom, and some apparel stores. The gift shop sells a 300-piece puzzle of Sebastian Vettel's face and a Nürburgring-logo toaster.

The track's modern mismanagement is a curious shame. Local sentiment suggests the business managers who oversaw the investment were unscrupulous and had no feel for the Ring's culture or its community. Take the Ring Card: In theory, this prepaid debit card could be used to pay for everything from bar tabs to tourist-day drives to lodging at the new Lindner Congress & Motorsport Hotel. In reality, many local businesses don't accept credit cards, let alone a high-tech system

During the 24 Hours of Nürburgring, more than 250,000 people will descend on the village to buy all the milk, bread, sausages, firewood, and every last available beer, which is not an easy thing to do in Germany.









LEFT: Brünnchen corner, a popular party spot. ABOVE: The author on the track's grounds, attempting to blend in. Note the inflatable hot tub, which he most definitely did not expense to this magazine.

of corporate scrip. Those businesses, including the legendary Sport Palace hotel bar, would be effectively shut out of any new tourist revenue the renovations might have attracted.

In 2012, the Nürburgring's owner declared bankruptcy. "Save the Ring" campaigns began immediately. German autoparts supplier Capricorn Group bought the track for a reported $107 million in 2014 but defaulted almost immediately. A few months later, Russian pharmaceutical billionaire Viktor Kharitonin reportedly took over Capricorn's majority share. The Ring Card was scrapped as of January. The Ring Racer may be dismantled.

The Nürburgring's uncertain fate hangs over the region like a guillotine, but daily life goes on. Manufacturers test, racers race, tourists line up for Sunday drives, and Rotek prepares to coach its clients. The team hosted two drives that weekend: Pritzker shared the RS4 with Ken Dobson, a pro 'shoe training for a seat in the 24 Hours. Dmitry and his co-driver, a Russian pro named Roman Rusinov, were in the TT RS. A small TV crew shadowed the pair for a reality TV show.

The night before the race, Rotek's neighbors, Audi Sport Team Phoenix, walked into a cozy Irish restaurant and exchanged nods with Holland and Pritzker. The gesture seemed curt, but Holland told me it was just part of the stoic German culture.

"I'm the only black guy for a thousand kilometers, so I did wonder, at first, if it's a racial thing," he said. "But I realized it's more of an American thing. The more they get to know you, that you live here and you make an effort to be part of the culture, they're nice and very welcoming, very warm." It carries over, he said, to the smaller teams and suppliers. "It's still a bunch of drivers and mechanics. We borrow parts, that sort of thing. The car-guy mentality is the same as anywhere. It's just more of everything."

Race morning was wet and frigid. I was lucky to have made it into the garage at all, because I failed to secure a press pass before I arrived. At most tracks, these are not hard to come by, but they require advance notice. Getting credentials on a race day typically ranges from impossible to extremely unlikely. But Uli Baumert, Rotek's race manager and an AMG test driver who has lived in the area for decades, made a call. Team manager Rebecca Kessler escorted me to the press office and quickly sorted it out. Afterward, in true German fashion, she was compelled to note that rules had been broken.

A heavy fog rolled across the track, and the VLN finale was delayed after a single lap. Immediately, hundreds of Europeans stepped outside and lit cigarettes. Six cars piled into the tiny garage that Rotek shares with two other teams, and the air filled with the sound of impact wrenches and parts clanging off concrete. Ninety minutes later, with no discernible change in conditions, the race restarted with a savage scrum that saw eight cars off the track within a few corners. An Opel Astra OPC Cup slid backward at Mercedes Arena; a BMW Z4 sat like a lumpy target in the middle of Warsteiner curve. The circuit is so long that there were no laps run under a yellow flag, only sections of track running under caution.

And then the TT RS was back in the garage with a burned clutch. A new one was installed in short order, but Dmitry couldn't get his helmet on. He dug a gloved hand around his temples, fishing for the chin strap. Baumert finally helped him buckle in. The kid, despite being clearly rattled, climbed behind the wheel and gave a thumbs-up. Given the murk and the field's speed differential, I wanted to stand up and applaud. Four hours later, someone won the race. It was hard to tell with the fog, which continued rolling in as the checkered flag waved.

That evening, Holland and Pritzker went to the end-of-season party. It was a typical German club scene, a cavern filled with fog machines and pummeling house music. Holland bought a round of beers for his crew, shook each person's hand, and thanked them personally. Twenty minutes later he was out the door, back to Gottlieb-Daimler-Strasse, and straight to bed. Soon he'd hit the road to manage his responsibilities as a sponsored pro driver. He'd head to SEMA, in Las Vegas; the Macau GP in China; California's 25 Hours of Thunderhill; and the PRI trade show in Indianapolis. Then the Autosport trade show in England, followed by the 24 Hours of Dubai and the 12 Hours of Bathurst in Australia. Holland expected to see his Denver home for maybe two weeks over the next four months. Preseason testing at the Ring begins the first week of March.

DAB THE BRAKE, JUMP, LAND, DAB THE BRAKE. This is the basic recipe for not doing cartwheels. I repeated this mantra because,

SEAN KLINGELHOEFER (LEFT)



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I came over a blind crest to find a crashed Opel, parts scattered through the grass like a yard sale, its driver leaning on the Armco and smoking a cigarette.

after a quick familiarization lap, Holland tossed me the keys to his Focus RS, yawned, and went in search of caffeine. My first lap behind the wheel at the world's most dangerous racetrack, and the resident pro driver was at a restaurant sipping cappuccino. At least the weather was lovely.

The Ring opens for public lapping—in everything from caged race cars to tour buses and sidecar motorcycles—most weekends and some weeknights from April through October. As I queued next to a Ferrari 458 and a Citroën C4 Cactus, the sidewalk crowds leaned close and leered at drivers, perhaps willing them to do something stupid. I remembered Holland saying that the Ring's famous track graffiti can be slick as ice and changes nightly, so even seasoned professionals are never sure of the grip.

Everything from the weather to the fans conspires to keep this place unknowable. I began thinking of all the ways things could go wrong. Then the gate opened, I squeezed the wheel a few times to calm myself, and I took off.

Tourist laps cut out the track's long main straight, leaving a rollicking, never-ending offensive of blind corners, high-speed kinks, sharp climbs to the sun, and steep, stomach-floating dives into long chasms. The beech forest closes around you, trees packed straight and dark like the bristles of a saddle brush, before you burst through the foliage into an explosion of green and gold. This is a tricky and uncompromising place, and accidents are common. Runoff is nonexistent; trees hug the fencing that hugs the track. Niki Lauda almost died here, and Peter Collins and John Taylor and dozens of others did. As this article was being written, Jann Mardenborough's Nissan GT-R Nismo GT3 went vertical over Flûgplatz during the 2015 VLN season opener, tumbling over a catch fence. One spectator was killed and several others were injured. Organizers then took the unprecedented measure of imposing speed limits on sections of track for the Nürburgring 24 Hours. The popular GT3 class may have finally outpaced the narrow, treacherous Ring, just as F1 cars did in the 1970s. That could be a dire blow to the bottom line.

Mythology doesn't associate with speed limits, and in an increasingly sanitized world, a battle against mortality remains the Nürburgring's stock-in-trade. But that can become self-serious, or even morbid, and it's not the only reason the Nürburgring is worth saving. It's also joyous, vital, and authentically weird. On tourist days, the Ring adheres to the same laws as any other German highway. Passing on the right is forbidden; helmets are optional.

A bright-yellow Peugeot 208 with a ludicrous wing slid around me in Kallenhard corner, the driver sawing the wheel with his left hand and casually waving with his right. Later, I came over a blind crest to find a crashed Opel, parts scattered through the grass like a yard sale, its driver leaning on the Armco smoking a cigarette. *If this place ever disappears,* I thought, *one more adventure will have vanished from the world. Children won't believe it existed.*

My first lap over, I queued again. Then again, and perhaps once more, and it briefly seemed as if I could do it forever. And when the sun took on the soft, flat slant of late afternoon and it was finally time to leave, I lowered my windows as I passed two long, candy-colored columns of cars at the track entrance. Idling engines tumbled the air in a bebop rhythm. Somewhere in the procession, a driver stabbed a throttle and let loose the thump-crack roar of a small-block V-8, setting off a chain reaction. The noise swelled to a shrieking, thunderous symphony of flat-fours and straight-sixes and eights and twelves. The sound shuddered through my bones all the long way back down the mountain. ■

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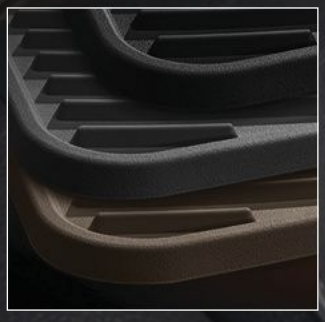
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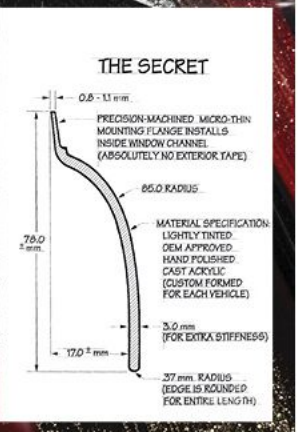
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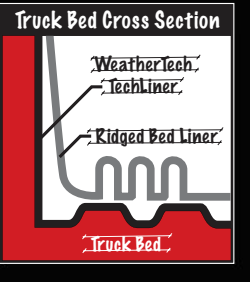


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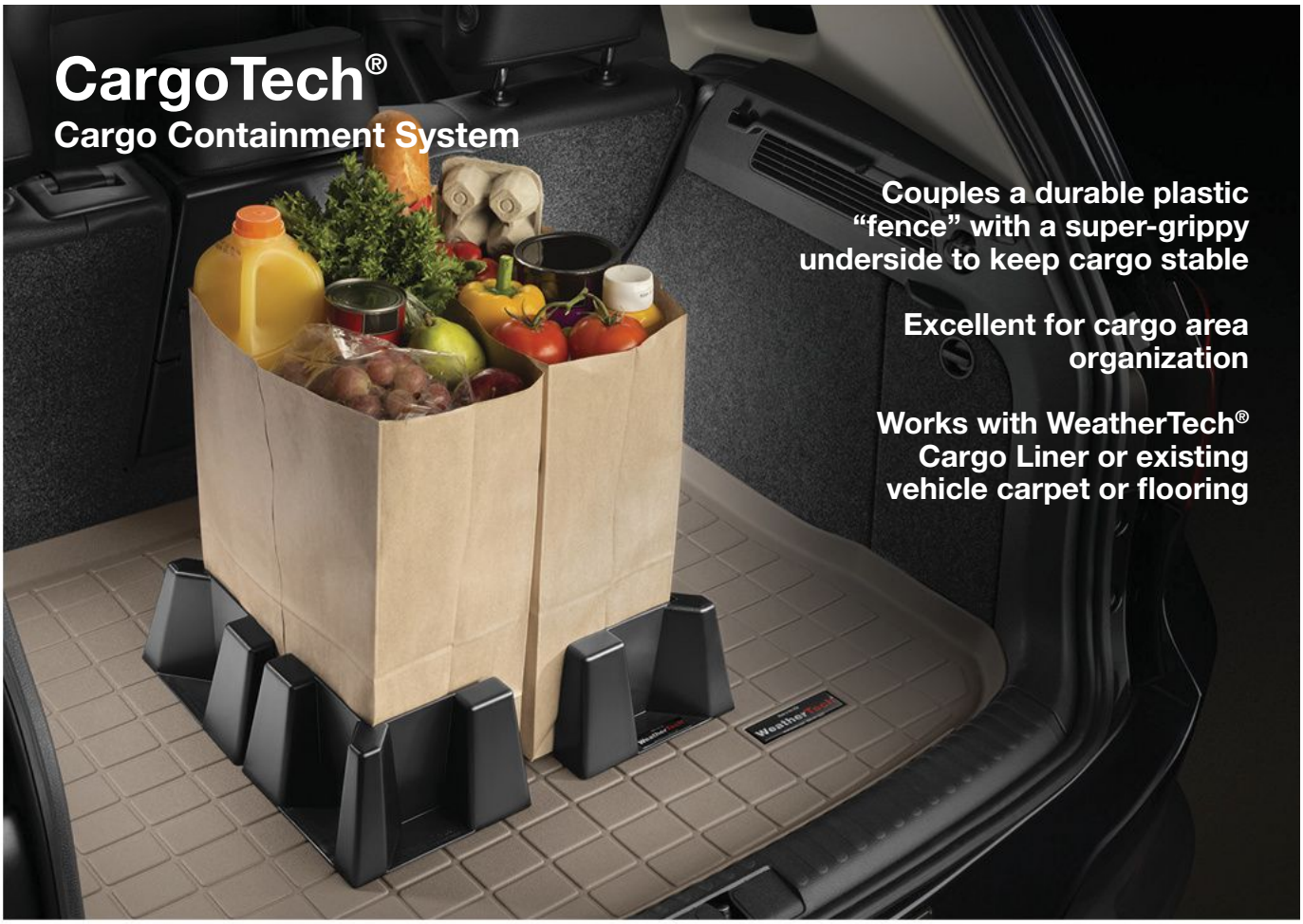
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THE LONG-TERM TEST WRAP-UP | 2014 CHEVROLET CORVETTE STINGRAY

THE HARD GOODBYE

A YEARLONG TOUR DE CIRCUIT WITH THE BEST SPORTS CAR AMERICA HAS EVER BUILT.

BY **MAX PRINCE** | PHOTOGRAPHY BY **JAMEY PRICE & MATT TIERNEY**



ON PAPER, THE C7 CORVETTE STINGRAY SEEMS a lot like the C6 and the C5 before it. Pushrod V-8 up front, transverse leaf springs out back, a robust manual gearbox, targa top, fat tires, and all the machismo of Josey Wales toting a bazooka. Do not let these similarities fool you. The C7 isn't another Corvette. It's a revelation.

Two years ago, the new Stingray beat a Ferrari F12berlinetta, Porsche Cayman S, Mercedes SLS Black Series, and nine others at our inaugural Performance Car of the Year shootout. The Vette's raw numbers impressed (3.8 seconds to 60 mph, 1.07 lateral g's), but it was the C7's newfound refinement that won out.

Still, questions lingered. Would its PCOTY luster wear off? Could it stand up to regular beatings and the daily grind? How quickly would it lap, say, Summit Point or Road Atlanta, perhaps sideways and howling at 6500 rpm with the entire regional BMW CCA giving chase?

Clearly, these questions all needed answering. So we ordered a C7 Corvette last March, a seven-speed manual with sport seats. The $4000 Z51 package (close-ratio gearing, uprated suspension and brakes, dry-sump oiling, aero kit, electronic limited-slip diff) was a no-brainer. For one year, we drove that white Stingray all over humanity. Before Chevrolet asked for its car back, I managed to sneak in a 2400-mile cannonball run, first from Ann Arbor to New Orleans, then a last hurrah at Carolina Motorsports Park. Swampland, sweet tea, lucid powerslides, and time ruminating on what the car meant to us.

It was wonderful. Eisenhower's *Yellow Book*, which mapped out America's interstate highway system, was published in 1955, the same year GM started shoehorning small-block V-8s into the Corvette. No two events have done more to shrink this country. The Stingray's 6.2-liter lopes effortlessly at 70 mph in seventh gear, tach needle buoyed under 1600 rpm. Tire noise and

2014 Chevrolet Corvette Stingray Z51

BASE PRICE $54,795
TEST PRICE $66,775
POWERTRAIN 6.2-LITER V-8, 460 HP, 465 LB-FT; RWD, 7-SPEED MANUAL
EPA CITY/HWY 17/29 MPG
OBSERVED MPG 21 MPG
MILES LOGGED 27,171



Doing the deed at Carolina Motorsports Park, on one of the Vette's many track days.

clumsy cylinder deactivation are easy to ignore once the targa top comes off. Open-top motoring is bliss. Whole states disappeared without stopping for fuel. Did I mention it got 28 mpg along the way?

With a few niceties, our Stingray cost $66,775. Contributing editor Jack Baruth called it the "finest combination of track pace and back-road aplomb any manufacturer has ever offered for that price." Thundering through the Bayou, drunk on sunshine and prickly AM radio, my mind wandered. I considered life in a studio apartment and the savings potential of making my own deodorant. Good cars get you daydreaming; great ones force you to reassess priorities. Later, I found out editor-at-large Sam Smith had already gone through the motions.

"After a track day in Kentucky, I actually called Chevy and tried to buy our long-term car. They said no," he told me. "I have never, ever done that before. Can't remember the last time I wanted to do it, either."

Understandable. The cockpit has improved by an order of magnitude, so cross-country trips no longer feel punitive. "A BMW M3 owner could love this interior," said deputy editor Joe DeMatio. "The Corvette is finally something you can valet at nice restaurants and hotels. Parking dudes cut through the clutter of automotive cachet, and the Stingray got their attention." Sixty weeks of hard use, and our cabin showed little wear. No squeaking trim pieces, no rickety seat sliders. Those plastic fantastic C5s and C6s of yore are gone. Only their best dynamic qualities remain, whetted and polished.

The Stingray is proof of a front-engine, rear-drive, eight-cylinder sports car's fundamental goodness. Balanced. Communicative. Responsive. At full tilt, the noise is somewhere between the world's tamest Yenko and angriest grizzly bear. Road test editor Robin Warner, who joined me at Carolina Motorsports Park, romped around the 2.3-mile road course, leaving a yellowed cloud of tire smoke and pollen in his wake.

"That would've been *real* white-knuckle three years ago," he laughed, pulling off his helmet back in the paddock. "But this car is so neutral. The little nasty streak, where the old Corvette







We beat on the Stingray mercilessly, and it never went down for repairs. Interior held up, too.

would skate over a lump and pitch the rear, is totally mellowed."

I'm sold on the Z51's electronic differential, too, after the rear stepped out a bit through Turn 3. Hammer down, dab of countersteer. Duck soup. Nothing this powerful is as tidy and gentle. It lets experts drive like idiots, and more endearingly, makes idiots looks like experts. That sort of affirmation gets under your skin. Back in the pits, I found a note Smith scribbled in the Corvette's logbook: "This thing is a missile from God."

The car isn't without warts. Those gorgeous carbon-backed buckets would be better mounted two inches lower. While the Tremec seven-speed feels brilliant, the gate can narrow under duress. And the Stingray is happier south of the Mason-Dixon: Single-digit temps bring a reluctant starter motor and creaking body over speed bumps and potholes.

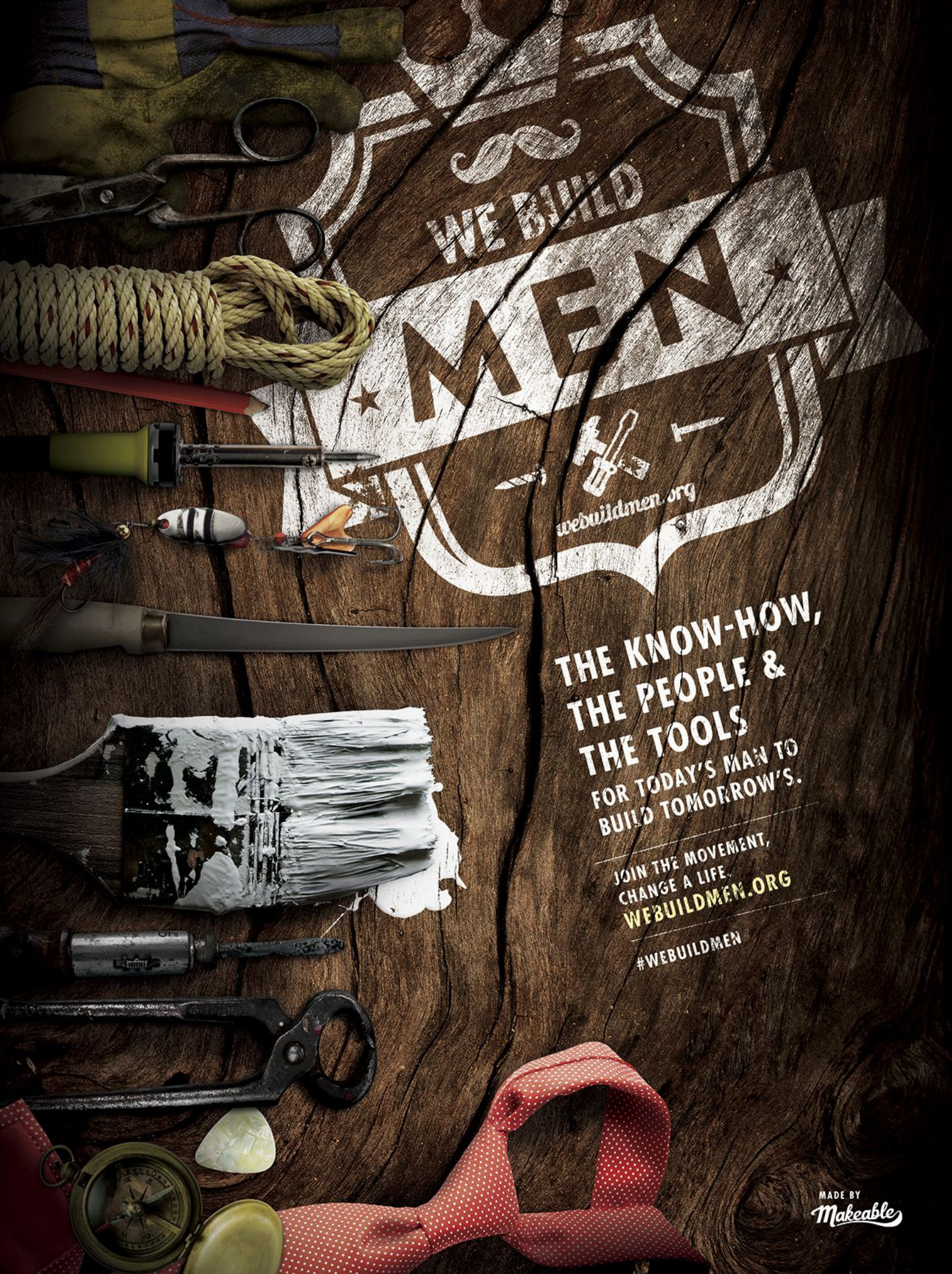
In total, *R&T* racked up 27,171 miles, obliterated 12 tires, and managed 21 mpg. But that pile of numbers isn't the important stuff. From Michigan to Louisiana, South Carolina and back, strangers flocked to the Corvette. Legitimate fanfare. In Memphis, a seven-year-old boy flapped his arms in excitement posing for photos behind the wheel; in Ohio, a gas station attendant tried to buy the car over the loudspeaker. At a stoplight near Charlotte, an old man rolled down the window of his Suburban and encouraged me to drag-race the red 991 Carrera S next to us. "You can take 'em," he said. There may even be a small-town Mississippi sheriff who'll tear up a speeding ticket in exchange for a few revs.

This, at least in part, is because the car looks striking. It's a hard-edged take on the familiar, like Trent Reznor covering *Pet Sounds*. The Stingray's silhouette just resonates. Baruth also posits the attainability factor, a perfect balance of pinup reverie and upper-middle-class reality. He's right. But I like to think it's even more basic, that people still recognize something special when they see it, and maybe there's a bit of pride because it's ours. The Corvette has always been a car America wants. Now, finally, it's the one we deserve. ■

R&T OFFICIAL TEST RESULTS

0–60 MPH	ROLLING START, 5–60 MPH	STANDING ¼-MILE	TOP SPEED	BRAKING, 80–0 MPH	SKIDPAD, 300-FOOT
3.8 sec	4.6 sec	12.2 sec @ 117 mph	185 mph*	184 feet	1.07 g

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THE FIRST DRIVE | 2016 CADILLAC ATS-V

OUT OF THE GATE

WITH THE 464-HP ATS-V, DOES CADILLAC FINALLY HAVE AN ANSWER TO THE BMW M3?

BY **SAM SMITH** | PHOTOGRAPHY BY **NATE HASSLER**





"I'M NOT GONNA LIE TO YOU," he said, "the V-8 will fit."

Loaded words. Similar statements have produced everything from the original Shelby Cobra to the first real Corvette. And so I stood in front of the 2016 Cadillac ATS-V's open hood, on pit road at Texas's Circuit of the Americas, and I looked. And I had no reason to doubt him.

I also let out a sigh. Because I was staring at a V-6.

"He" was Tony Roma, the Cadillac's chief engineer. Roma has a reputation for being straightforward, and he is one of the more interesting guys in the business. He was also chief engineer on the Camaro ZL1. He managed the engine program for Cadillac's CTS-V World Challenge cars. He's a club racer, and he thinks the way we do. Over drinks during the ATS-V media launch, he said positive, if unprintable, things about big engines. If you heard these things, you would love him forever.

Still, progress is progress. Smart engineering mostly dictates that V-8s into smallish cars no longer go. The ATS-V is GM's first real attempt to take on the German sport-sedan kings, chiefly the 425-hp, twin-turbo BMW M3. Roma makes no bones about it: "We like to benchmark for one exact car." They chose the E90-chassis M3 during ATS-V development, then adjusted metrics to anticipate the coming (now current) F80 model. If you're entering a game of thrones, may as well shoot for the top chair.

Emissions and fuel-economy concerns mean that a 464-hp, 444-lb-ft, twin-turbo V-6 is the ATS-V's only available engine. It sounds fantastic—a better snarl than the M3's muted straight six—and gets the job done, but at low speed, it's a coarse, lag-prone device. It's occasionally hard to be smooth with, and even harder to get excited about. The launch presentation also neatly sidestepped the fact that the ATS's 3.6-liter six has decidedly down-market roots. Dubbed

Cadillac ATS-V

PRICE $63,660 (COUPE)
POWERTRAIN 3.6-LITER TWIN-TURBO V-6, 464 HP, 444 LB-FT; RWD, 6-SPEED MANUAL
WEIGHT 3700 LB
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There's a certain glory to driving a $61,000 Cadillac like a NASCAR stocker, chucking sideways and jumping curbs, and a clutch pedal just adds to the illusion.

LF4, the engine is an evolution of the LF3 engine from the CTS Vsport, which is itself an evolution of the decade-old "high-feature" six used in a zillion other GM cars—everything from the Chevrolet Malibu to the Buick LaCrosse.

Like the standard ATS, the ATS-V is available as either a sedan or a coupe. In its cheapest form, as a four-door with a six-speed Tremec manual, the car costs $61,460. How do you gird a Malibu mill for 60-grand battle with a BMW six, one of the finest engines in the world? GM says you take an LF3 and reengineer it, adding things like titanium rods, new crankshaft counterweights, and a different intake manifold. Then you bump boost from 12 to 18 psi via new turbos and wastegates and pray no one gives you crap about your engine's family tree.

The Cadillac makes more power and torque than the BMW, but it's hard not to miss the M3's smoothness. Also its near absence of turbo lag, smoothness, and—did I say smoothness?

Regardless, the machine wrapped around that V-6 is fantastic. Onto the bones of the ATS coupe and sedan go 50 percent higher spring rates, wider tires and front track (the coupe outfats the sedan in the rear by 23 millimeters), and uprated bushings and ball joints. Additional underhood bracing and an aluminum lower-body brace help raise torsional rigidity a claimed 25 percent. The differential is the telepathic, computer-controlled active unit also seen on the Corvette, and GM's Magnetic Ride Control dampers are standard. It has large Brembo brakes. You do not get a carbon-ceramic brake option, Roma said dismissively, because his team believes high-performance cars should



hold up on a track without expensive options. (Hello, M3, and your $8000 ceramics.)

As a package, the car works pretty well. The engine is the sole hiccup in a mix that, at first blush, seems to outcommunicate the M3. The electrically assisted steering is more talkative; Roma says they discovered, late in development, that the ATS-V uses the same basic ZF steering hardware as the M3, which makes the feel difference all geometry and tuning. (Good for them.) The suspension is remarkably forgiving. The brakes offer a predictable pedal that grows long in track use but sports no perceptible fade. Engine lag diminishes at high rpm, and the Tremec shifts like a Tremec should: nicely chunky, virtually begging for abuse.

About that: The manual offers no-lift shifts and disengageable rev-matching. There is also an eight-speed automatic similar to the one found in the Corvette. All of this is faster than any human and perfectly acceptable if you want it. We suggest you not want any of it, because the car is a hundred times more engaging without it. There's a certain glory to driving a $61,000 Cadillac like a NASCAR stocker, chucking sideways and jumping curbs, and a clutch pedal just adds to the illusion.

Stretching legs on the road, in Texas's famed Hill Country.

After I climbed out of the car, I met Cadillac PR chief David Caldwell. "We said we were going this direction," he allowed, referring to Cadillac's recent pursuit of BMW, Audi, and Mercedes-Benz. "We didn't say it would happen quickly. And that doesn't always mean you sell a lot of cars out of the gate."

Maybe they'll sell a lot of ATS-Vs, maybe not. Our bet is somewhere in the middle. The car is certainly a lot of speed for the money, and as a track proposition, it's friendlier and gutsier than anything German. But as a prestige sport sedan, there's something intangible missing. You can't shake the notion that this car is a first step, not an arrival.

Still, good luck to them. As an American, you want a brand and a machine like this to succeed. And as first shots go, this one's a corker. ■

R&T OFFICIAL TEST RESULTS

0–60 MPH	ROLLING START, 5–60 MPH	STANDING ¼-MILE	TOP SPEED	BRAKING, 80–0 MPH	SKIDPAD, 200-FOOT
4.3 sec	5.6 sec	12.6 sec @ 114.7 mph	189 mph*	194 feet	1.00 g

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PEEKING INTO SUBARU'S CRYSTAL BALL.

REMEMBER 2011, WHEN THE SUBARU BRZ WAS the biggest car news in the world for, like, four months straight? It arrived during an escalating pony-car horsepower war, when the notion of an affordable, rear-drive two-plus-two with a manual gearbox was subversive, if not revolutionary. Early reviews of the BRZ neared Beatlemania. *So intuitive! So nimble! Drift it everywhere!* Then the grumbling began. At 252 horses, the Ford Focus ST outhoofed the BRZ by 52 hp. That became the de facto rationale for the Subaru's fading popularity.

Now, as then, the needs-more-fast argument is flawed: Balance and agility take precedence over raw pace, and the car always had balance and agility in spades. With the 2015 BRZ tS (see: "**t**uned by **S**TI," or Subaru Tecnica International), Subaru is playing to its strong suit. This new, Japan-only model demonstrates a future BRZ variant for the U.S. market and/or products from a dealer-installed performance-parts catalog. Those include a cat-back exhaust, 18-inch Enkei alloys wearing Michelin Pilot Sports, Brembo brakes, and a larger-diameter driveshaft, which quickens acceleration response and crispens shift feel. The tS also gets chin and trunk spoilers and a slew of fresh interior bits, including Recaro seats.

"Dial in the chassis" is usually shorthand for "make it stiffer than hell," and the last thing the BRZ needs is more starch. But STI had the right touch when it slightly lowered the ride height, added rear subframe support, and tweaked bushings and dampers. Most impressive, though, is bracing Subaru calls "flexible draw stiffeners" that promise to give additional rigidity without an increase in NVH. A strut-tower beam consisting of two braces, each with a spherical joint in the middle, adds structural support, Subaru says, while still allowing for vertical give—over curbing or rough pavement, for instance—to keep the tire on the road.

Through the high-speed turns of Japan's Suzuka Circuit, the BRZ tS feels like the car people once raved about: communicative, nimble, planted, intuitive. Pitch the tS into corners, search for extra tenths—the sensations are pure, old-school sports car. Steering feedback and the uncanny ability to catch a drift mid-corner make us happier than peak lateral g's or 0-to-60 times. There's a reason this car set the world on fire four years ago.

There's also a reason it faded so quickly. Around Suzuka, overall ride quality feels improved, but daily driving is where the BRZ has always struggled. If the base car didn't need more power—and I maintain that it still doesn't—the BRZ definitely needed *something*. More personality, more drama, better sound; something to make it tug at your heartstrings.

The BRZ tS certainly has more to like than the original. Should this (or a similar variant) reach the U.S. next year, it might finally be enough to make us fall in love.

—JOSH CONDON

Subaru BRZ tS GT (Japanese spec)

PRICE (JAPAN) $34,400
POWERTRAIN 2.0-LITER H-4, 200 HP, 151 LB-FT; RWD, 6-SPEED MANUAL
WEIGHT 2800 LB
0–60 MPH 6.7 SEC (EST)

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I swung a leg over the Icon edition and ripped through a brisk SoCal morning on the mountain roads near Idyllwild. Ducati kept the price low by fitting fairly basic components, yet the suspension soaked up lumps without making me wish for fancier bits. There is nothing new here, no innovation. Honing technology is the job of some other Ducati. I'll keep the Scrambler's single disc brake and four-piston caliper, because it's plenty with Pirelli MT 60 rubber. Anti-lock brakes are standard, but I never needed enough brake to engage them. The slightly nubby tires hung on, stopping as well as they thread across the mountainside.

Ducati Scrambler Icon

PRICE $8495
POWERTRAIN 803-CC L-TWIN, 75 HP, 50 LB-FT; RWD, 6-SPEED
WEIGHT 410 LB
0–60 MPH 3.5 SEC (EST)
TOP SPEED 130 MPH (EST)
ON SALE NOW

Outside Idyllwild, high above Palm Springs, I found my first quibble. As I downshifted from sixth to fifth, there was a false neutral where I'd hoped to find engine braking. The small, simple dash indicated less than 500 miles on the odometer, and it didn't happen again. That didn't stop me from waiting in turnouts for traffic to clear, then gobbling back roads in glorious third- and fourth-gear dashes. The Scrambler couldn't be more amenable. The bulk of its 410-pound wet weight is carried low; the seat is 31 inches off the asphalt. Even when I upset the rear, the single Kayaba shock quickly set the boomerang-shaped swing arm right. I basked in the smell of pine forest.

And then I was back down in the desert, tank glinting under the beating sun, admiring the Scrambler and its details. The exhaust and wheels and fenders can be swapped for bolder or wirier or browner versions, all from the factory. It's only for looks, but interchangeability and fiddling have kept Lego and gunsmiths rich. Motorcycles need more easy modularity. Maybe there's a little innovation here after all.

As great as it looks from 15 feet, the Ducati is better viewed as part of a larger picture. There's no gimmick, no superlatives, just fun and space for an attractive friend on the back. That's what makes it charming and why it's so good. The Scrambler reminds us what this whole motorcycling thing is about. —CHRIS CANTLE



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THE FIRST DRIVE | 2016 MERCEDES-MAYBACH S600

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YOU CAN SMELL IT WHEN THE DOORS SWING OPEN. That's agarwood oil, harvested from the jungles of Southeast Asia. Extracting the stuff is painstaking, as are the filtering, sunning, and aging processes. By volume, it's more valuable than gold. The Mercedes-Maybach S600 uses agarwood oil as air freshener.

Well, *synthetic* agarwood. And simulating the sweet spoils of Indonesian deforestation is perfectly in step with the modus operandi of Daimler's new limousine flagship. Here, Maybach reboots as a subbrand, the excessively luxurious counterpart to Merc's excessively fast AMG line. This inaugural S600 model is based on the existing S-class, albeit with an extra 7.9 inches of wheelbase. Being stretched to nearly 18 feet should distort the silhouette, but everything's cohesive. The Maybach hides its length using fattened C-pillars, redesigned 20-inch wheels, strategic masts of chrome, and shorter rear doors. A neat visual trick, and it works beautifully.

Jim agrees. He's my stoic driver, midsixties and a consummate pro, in full black suit and tie.

"Good looking car, yeah," he says through the chauffeur microphone system.

We bob gently over a rough Santa Monica on-ramp, and Jim eases the twin-turbo V-12 to freeway speed. The back seat might as well be a quilted-leather-lined bank vault. Robbe & Berking, a firm known for its yacht cutlery, provides bespoke champagne flutes. The twin jetliner-style thrones recline 43.5 degrees. There are hand-stitched footrests, alloy dining trays, throw pillows, sheepskin floor mats, and a bottle chiller. The front seatbacks have 10-inch LCD screens so you don't have to look outside. People can still see in. Each of the 24 Burmester speakers has its own amplifier so they don't have to share.

For its customer base, the car's perfect. Those chauffeured connoisseurs will, no doubt, relish the placid ride and silent serenity, and show off the Robbe & Berking to connoisseur friends, who in turn will buy a Maybach S600. Daimler claims this is the quietest back seat in the world. Affluenza quarantine. I need some air.

"So. Uh. Jim," I shout up toward the front, "spec sheet back here says we've got 523 hp . . . you ever burn rubber in this thing?"

For the first time all day, he cracks a smile.

So that's how we spend our afternoon, in a vacant lot, ripping off bootlegger turns and 0-to-60 runs. Jim can't stop laughing. He holds the brakes, loads up the rear, and pops off the left pedal. Torque delivery is almost instantaneous, 612 lb-ft before 2000 rpm, heaping on momentum until the seven-speed 'box glides to the next cog. I take a few tries with Jim in the back. The Maybach drives just like an 8/7-scale S-class, massive and quick, and massively quick.

We barely make it to Santa Barbara in time for the technical briefing, where Mercedes engineers take turns expounding on the Maybach S600's opulence. Everything they say is true. One particularly frumpy German sits next to me and crinkles her nose. Hopefully a layer of agarwood masks the burnt Goodyear underneath.

—MAX PRINCE

Mercedes-Maybach S600

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DOMESTICATED EXOTIC

SHOPPING WITH COLIN, **PAGE 104**

SHOPPING WITH COLIN

DE TOMASO PANTERA

CORNELIANI SUIT, J.C. PENNEY PRICE.



Penned by American designer Tom Tjaarda and sold in the U.S. between 1971 and 1974, the De Tomaso Pantera aimed to offer Ferrari Daytona performance at less than half the price. The spec sheet was impressive: unibody construction, four-wheel power disc brakes and independent suspension, rack-and-pinion steering, power windows, and standard air-conditioning. Ford's 351-cubic-inch Cleveland V-8 was mounted midship, mated to a five-speed ZF transaxle with gated shifter. De Tomaso promised 310 hp and a 0–60-mph time in the six-second range. What could possibly go wrong?

Well, a few things. First, De Tomaso was horrible at building a low-production supercar. Second, Lincoln-Mercury dealers were horrible at selling and servicing horribly built, low-production supercars. Rust was a serious issue, owing to the fact that De Tomaso used bare, untreated steel for the unibody, with multiple water traps, no less. Photographs exist of cars outside the factory in Modena, covered in rust, awaiting paint and assembly. Which explains why Panteras literally rust from the inside out. There is no explanation, however, for the horrendous cabin ergonomics, other than its Italian origins.

The Pantera still stirred up its fair share of lust. It was exotic yet unintimidating; a "Power by Ford" badge promised that your uncle could tune it. Attainability outshone the car's flaws, and roughly 5200 examples were sold in the U.S. between 1971 and 1974.

As a kid, I was smitten at first sight. Beginning with a red '71 that cost $10,000 in the early Nineties, I've owned a number of Panteras, including a rare European-spec GTS. The best of the bunch was a low-mileage, two-owner car from Beverly Hills, one of the cleanest Panteras I have ever seen. I loved its simplicity, effortless speed, and of course, that glorious Ford V-8. I sold it to a friend in 2000 but always kept an eye out for another.

While Panteras do have some mechanical sins, Ford

PHOTOGRAPHY BY **ANDREW TRAHAN**



essentially used customers as beta testers, so most cars were sorted under warranty. The endless stream of service bulletins remains a how-to guide for Pantera maintenance. And what Ford didn't figure out, a network of owners clubs, specialists, and an expansive aftermarket has. It's not uncommon for a Pantera to have wonderful A/C, shift well, and perform as its original spec sheet suggests, all without overheating. Problem is, few owners can resist modifying a Pantera. Finding a clean, stock (or sensibly upgraded) example is like discovering a Detroit street without potholes.

And the 1974 Pantera on these pages? It's that same Beverly Hills car I sold 15 years ago. When my friend, the new owner, approached me about selling, I simply couldn't resist. I wanted one, I knew the car, and I had a plan.

Contributing editor Colin Comer is R&T*'s chief vintage-car buff. His water traps are none of your business.*

THE PLAN

Early cars, known as pre-L models, are identifiable by lower ride height and slender, chrome bumpers. The L, or Lusso, version was introduced in late 1972. It had numerous updates to rectify the issues of earlier cars, as well as a redesigned dash. Unfortunately, the Lusso's tippy-toe suspension and heavy, unsightly, rubber-faced bumpers are a major turnoff.

In a perfect world, I'd want an untouched, flawless, push-button-door, pre-L Pantera. But like most people, I'm fond of the Lusso dashboard, and I appreciate the changes made in the final run of Panteras. This car, a late U.S.-spec L, offered me an opportunity to try something interesting: create a Lusso that looks and performs like a pre-L, without the problems. The best of both worlds.

THE PROJECT

I started by installing a set of early chrome bumpers, which only necessitated welding a few holes. To lower the car, I removed the one-inch spring spacers De Tomaso used to meet U.S. safety regulations. To simulate the stance of a GTS model (which wore now-unobtainable 15-by-10-inch rear wheels), I added one-inch wheel spacers to the original 15-by-8-inch rears and mounted fat, sticky Avon CR6ZZ competition tires. Headers and tuning woke up the 351 V-8, and a larger radiator with aftermarket high-velocity cooling fans ensures the engine runs at about 180 degrees, even on the hottest days.

The result is the supercar Ford should've sold, instead of the wheezy thing found at Lincoln-Mercury dealers in 1974. Although I went overboard on execution, you can do this on short money. New bumpers are less than $2000, and any body shop worth its salt won't charge much more for labor. Armed with Pantera Owners Club of America tech tips, the rest is mostly tuning and elbow grease. Considering nice pre-L cars now fetch six figures and a decent Lusso can be had for less than $75,000, this method represents a great route to Pantera ownership.

VERDICT The Pantera was a much better experiment than Lee Iacocca's later endeavor with De Tomaso, the Chrysler TC by Maserati (pronounced similarly to "Brut by Fabergé"). I had firsthand knowledge of this particular orange-red '74, and the car was a great foundation for my project. Deal.

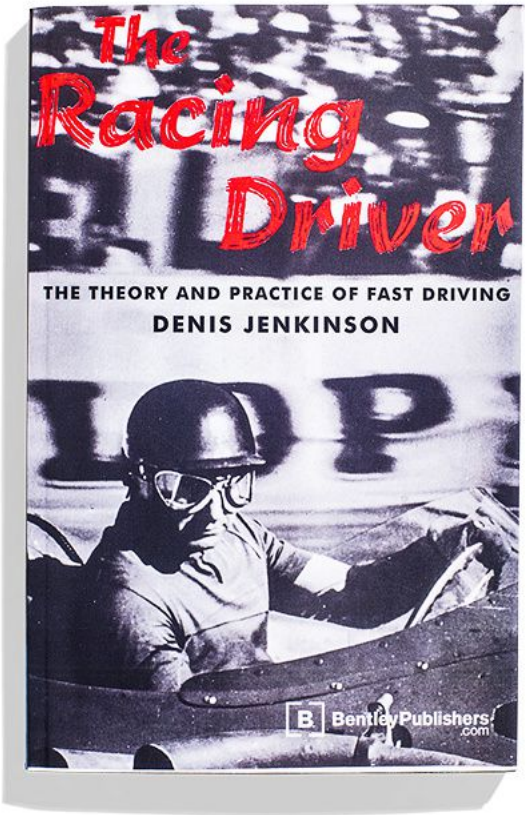
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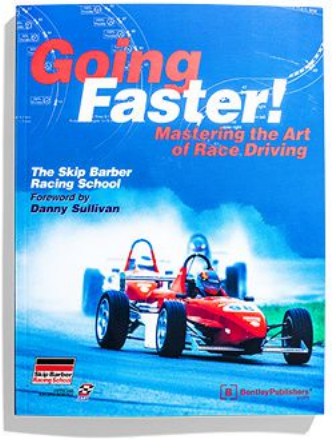


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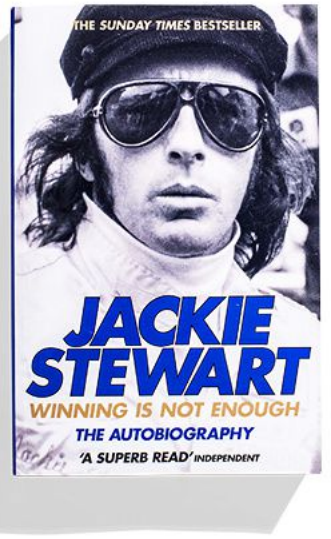
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—ROBIN WARNER



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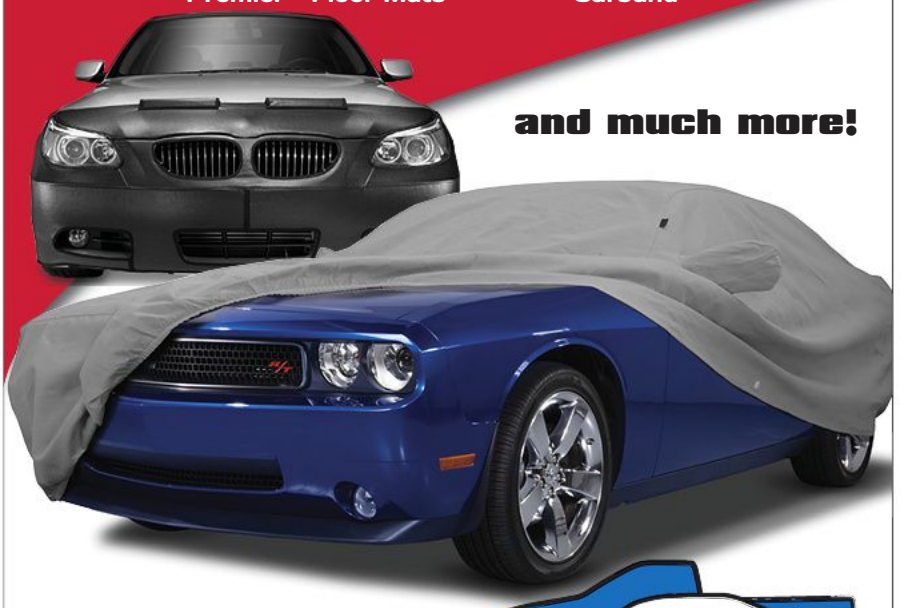
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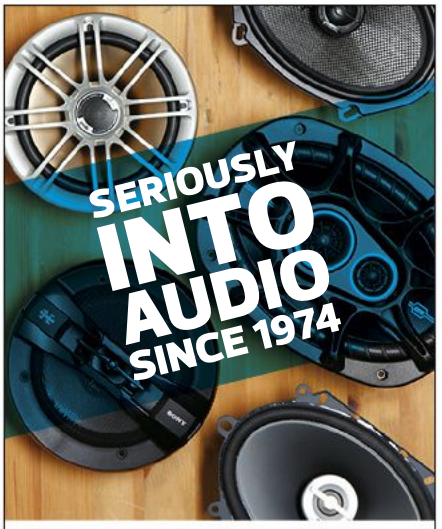


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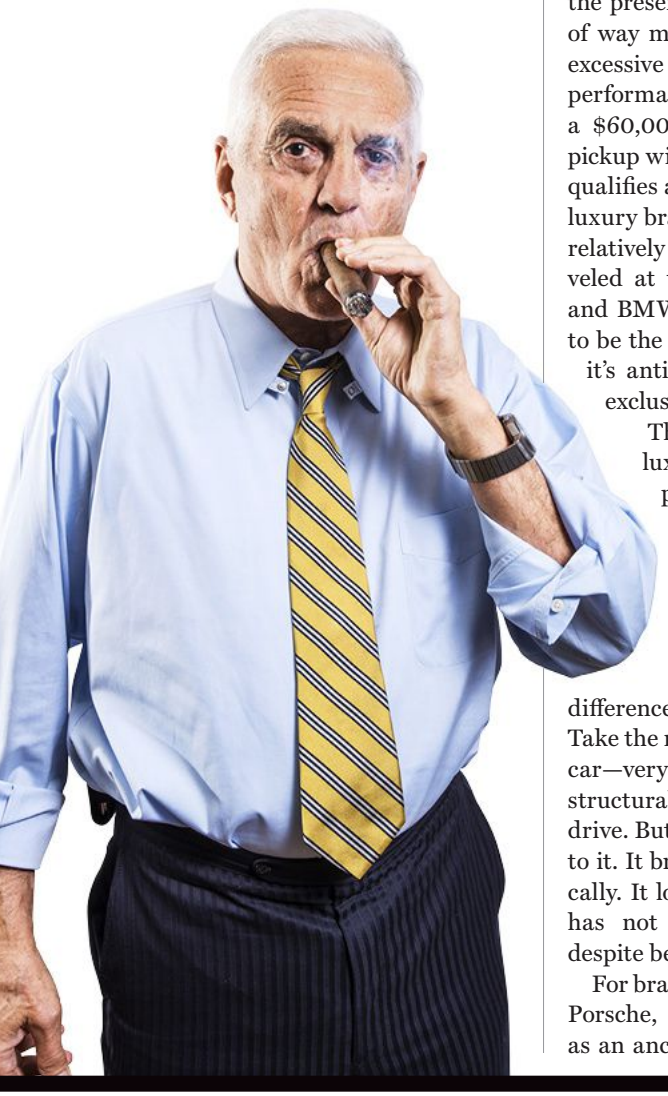
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The Luxury Problem

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I think we have to separate true luxury from what we broadly refer to as "luxury brands," including Acura, Infiniti, Cadillac, and Lexus. Even BMW and Mercedes no longer fit in the first category. When people are paying $800 a month for a Tahoe LTZ and $350 a month for a Mercedes or BMW 3-series, which one is luxury?



My favorite definition of luxury is the presence, in the product or service, of way more than you'll ever need. It's excessive capability, be it in size, style, performance, or features. That's why a $60,000, crew-cab, turbodiesel 4x4 pickup with a leather and wood interior qualifies as much as a Porsche. But true luxury brands have to be expensive and relatively exclusive. I've always marveled at the battle between Mercedes and BMW (with Lexus as an also-ran) to be the top U.S. luxury brand. To me, it's antithetical to be simultaneously exclusive and the most popular.

The things that separate near luxury from true luxury are purely psychological. There's no technological or capability difference. It's what's in people's minds. Take the new Cadillac CT6. It's a terrific car—very well engineered, lightweight, structurally sound. It's wonderful to drive. But I don't think people will flock to it. It breaks no new ground aesthetically. It looks a lot like the CTS, which has not been a resounding success despite being a great car.

It's antithetical to be simultaneously exclusive and the most popular.

For brands like Ferrari, Maserati, and Porsche, racing heritage is important as an anchor for image. In other cases, like Rolls-Royce and Bentley, it's the car of kings and heads of state and so forth. The company derives its prestige from a nonperformance, aspirational thing. Brands like Cadillac and Lincoln have to ask themselves where their anchor is. Where does the prestige come from?

Cadillac was fine in the Thirties, Forties, and Fifties, and then it went downhill, along with Lincoln. That's going to be tough to get back. It can only come from focused and consistent messaging on the excellence of the car, and it's got to be accompanied by dynamite styling.

For Cadillac and Lincoln, the priority should be to build the best-looking full-size sedan in the world. If everything you do is the best looking with the best trim, the best leather, and the biggest wheels, the performance just has to be adequate. The car doesn't have to win every high-performance comparison test. It just has to be so compelling that it forces people to consider the brand. That's where the new Lincoln Continental concept succeeds. It will have some people who have never considered a Lincoln saying, "Boy, this thing looks great." Then they'll drive it, and sure enough, it will likely drive great.

Building or maintaining a luxury brand is a huge challenge, and many people don't understand it. It's hard to take kids out of rural America and say, "You're now the marketing manager of a luxury brand at GM, Ford, or FCA." They've never lived luxury. They probably come from a modest family, and they don't know how people who know and appreciate luxury think and act, or what they respond to. Thinking in terms of the luxury experience totally escapes people who consider luxury dining Red Lobster instead of Big Boy.

Luxury brands are getting harder and harder to define. I fully admit my own views on them are in a state of flux. Ask me on different days and I'll give you a different answer.

The column's Q&A format will return next month. Bob Lutz has been The Man at several car companies, so your problems are cake. Bring 'em on.

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